U.S. DEPARTMENT OF COMMERCE
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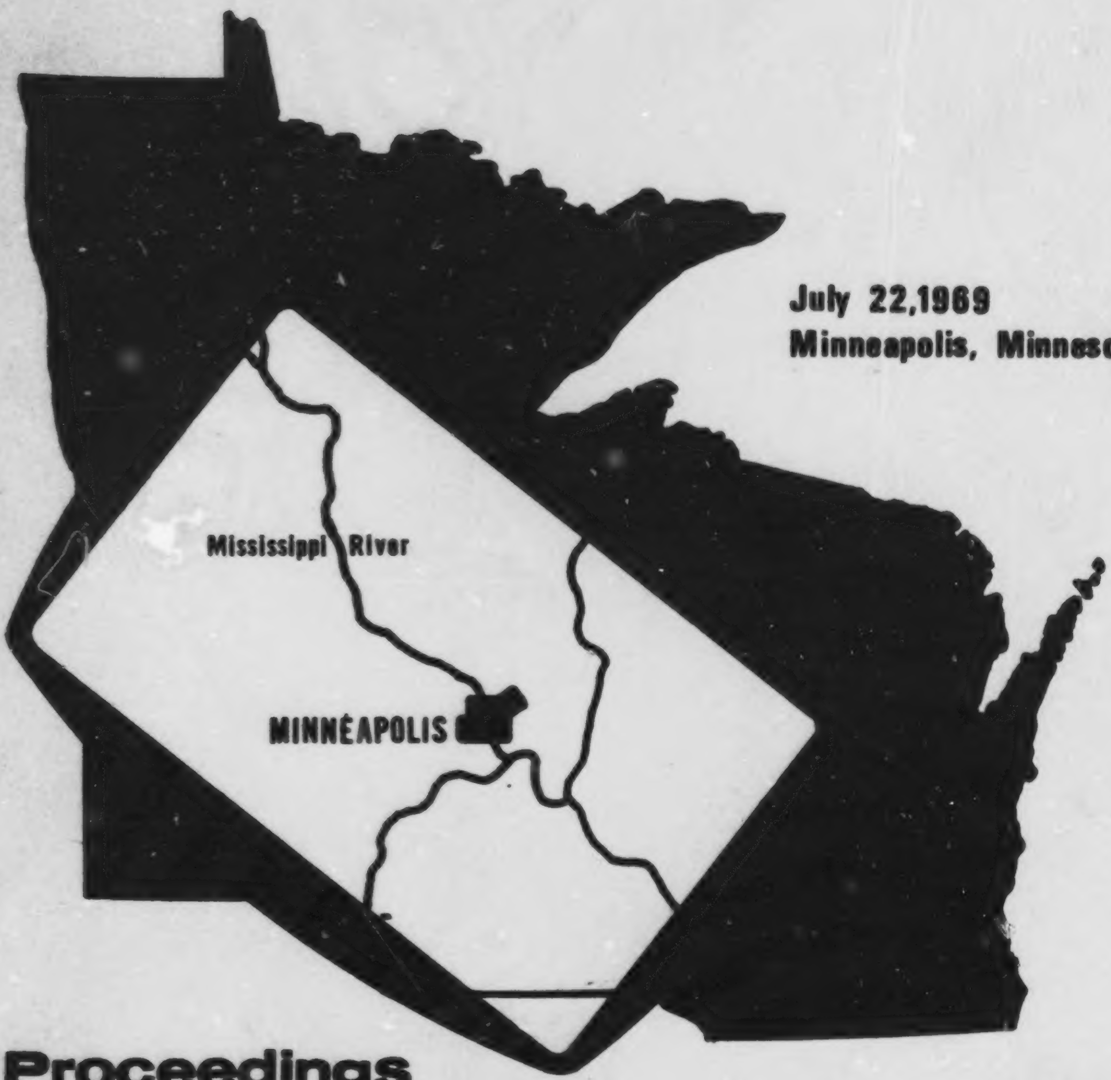
PROCEEDINGS: PROGRESS EVALUATION MEETING IN THE MATTER OF THE INTERSTATE AND INTRASTATE WATERS OF THE UPPER MISSISSIPPI RIVER AND ITS TRIBUTARIES - MINNESOTA AND WISCONSIN, HELD IN MINNEAPOLIS, MINNESOTA, JULY 22, 1969

Federal Water Pollution Control Administration
Washington, D.C.

1969

PB 263 312

PROCEEDINGS



July 22,1969
Minneapolis, Minnesota

Proceedings

Progress Evaluation Meeting in the Matter of the Interstate and Intrastate Waters of the Upper Mississippi River and its Tributaries - Minnesota and Wisconsin

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U. S. Department of the Interior
Federal Water Pollution Control Administration

SECOND

PROGRESS EVALUATION MEETING

IN THE MATTER OF
THE INTERSTATE AND INTRASTATE WATERS
OF THE
UPPER MISSISSIPPI RIVER AND ITS TRIBUTARIES -
STATES OF WISCONSIN AND MINNESOTA

held in

Minneapolis, Minnesota
July 22, 1969

TRANSCRIPT OF PROCEEDINGS

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Second Progress Evaluation Meeting in the matter of the interstate and intrastate waters of the Upper Mississippi River and its tributaries in the States of Wisconsin and Minnesota reconvened at 9:30 a.m. on July 22, 1969, at Minneapolis, Minnesota.

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The meeting was concerned with the interstate and intrastate waters of the Upper Mississippi River and its tributaries in the States of Minnesota and Wisconsin. It was held under the provisions of Section 10 of the Federal Water Pollution Control Act, as amended.

The purpose of the meeting is to bring together the State water pollution control agencies, representatives of the United States Department of the Interior, and other interested parties to review the existing situation and the progress which has been made to comply with the conference recommendations.

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15. **Supplementary Notes.** Enter information not included elsewhere but useful, such as: Prepared in cooperation with . . . Translation of . . . Presented at conference of . . . To be published in . . . Supersedes . . . Supplements . . . Cite availability of related parts, volumes, phases, etc. with report number.

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17. **Key Words and Document Analysis. (a). Descriptors.** Select from the Thesaurus of Engineering and Scientific Terms the proper authorized terms that identify the major concept of the research and are sufficiently specific and precise to be used as index entries for cataloging.
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PROCEEDINGS

OPENING STATEMENT
BY
MR. MURRAY STEIN

MR. STEIN: This meeting is open.

This meeting for the conference in the matter of the interstate and intrastate waters of the Upper Mississippi River and its tributaries in the States of Minnesota and Wisconsin is being held under the provisions of Section 10 of the Federal Water Pollution Control Act, as amended.

The first session of this conference was held February 7 and 8, 1964, and was initiated in accordance with requests from the Governors of Minnesota and Wisconsin, as well as on the basis of reports, surveys, or studies. The second session of the conference was held on February 28, March 1, and March 20, 1967. We also had a progress meeting on April 30, 1968.

Both the State and Federal governments have responsibilities in dealing with water pollution control problems. The Federal Water Pollution Control Act declares that the States have primary rights and responsibilities for taking action to abate and control pollution. Consistent with this, we are charged by law to encourage the States in these activities.

At the same time, the Secretary of the Interior is charged by law with specific responsibilities in the field of water pollution control in connection with pollution of interstate and navigable waters. The Federal Water Pollution Control Act provides that pollution of interstate or navigable waters which endangers the health or welfare of any persons shall be subject to abatement. This applies whether the matter causing or contributing to the pollution is discharged directly into such waters or reaches such waters after discharge into a tributary.

The purpose of this meeting is to bring together the State water pollution control agencies, representatives of the United States Department of the Interior, and other interested parties to review the existing situation and the progress which has been made to comply with the conference recommendations.

The official State agencies are the Wisconsin Department of Natural Resources and the Minnesota Pollution Control Agency.

Mr. Poston--and we will get to the State people--is the Federal conferee.

My name is Murray Stein, and I am from FWPCA headquarters of the Department of the Interior, Washington, D. C., and the representative of Secretary Hickel.

These agencies are parties to the conference. In one or two conferences we have had in this area some of the procedure has been misunderstood. Let me make this very clear for the people here. The Wisconsin and Minnesota and Federal representatives are parties to the conference. We confidently expect, and we always have done so, to give anyone who has anything relevant to say an opportunity to make a statement.

However, what we do under the law is invite the State agencies to the conference. The Federal people also invite other Federal people where appropriate. We turn over the time of the States to them, that is Wisconsin and Minnesota conferees will manage their own time. If you wish to make a statement, get in touch with the Minnesota or the Wisconsin conferee and they will schedule you to make a statement in your time.

Under the law, if this is not the case, if you can't do that, you can come to the Chairman. However, with the conferees with these two States represented here, I am sure that there is going to be no problem in making your arrangements with the representative from Wisconsin or the representative of Minnesota.

In order to have a proceeding which will develop the facts in an orderly fashion, we will have statements from the conferees and the other participants and then permit comments or questions by the conferees, not from the floor. If you have any question or any statement or any comment to make, just hold that and when your time comes you will be given an opportunity to make that statement.

A record and verbatim transcript of the meeting is being made by Virginia Rankin. This is being made for the purpose of aiding us in preparing a summary and also providing for a complete record of what is said here.

Copies of the summary and a transcript of this meeting will be made available to the official State water pollution control agencies. We have generally found for the purpose of maintaining relationships within the States that people who wish summaries and transcripts should request them through their State agency rather than come directly to the Federal Government. The reason for this is that when the meeting has been concluded, we would prefer people who are interested in the problem to follow their normal relations in dealing with the State agencies rather than the Federal Government. Anyone other than the conferees wishing to make a statement should come to the lectern and should identify themselves with their name and their affiliation so we can maintain an accurate record.

In view of the large number of conferees on the panel, we are going to ask them to introduce themselves, but I would first like to introduce Fred Wampler, our Regional Coordinator. Mr. Wampler, will you stand up. Glad to see you. Mr. Wampler has been an excellent supporter of water pollution control from the days when he was in the Congress of the United States.

Can we go to the left and start introducing yourselves, please.

MR. DAMON: I am Andrew Damon, Assistant Director, Bureau of Legal Services, Department of Natural Resources, representing the State of Wisconsin.

MR. WISNIEWSKI: Ted Wisniewski of the Wisconsin Department of Natural Resources.

MR. POSTON: H. W. Poston, Regional Director, Federal Water Pollution Control Administration.

MR. BADALICH: I am John Badalich, Executive Director of Minnesota Pollution Control Agency.

MR. TUVESON: Robert Tuveson, member of the Minnesota Pollution Control Agency.

MR. PACKARD: I am Wayne Packard, also a member of the Minnesota Pollution Control Agency.

MR. GADLER: Steve Gadler, member of the Minnesota Pollution Control Agency.

MR. STEIN: Thank you.

At this point we would like to call on Mr. H. W. Poston for the Federal presentation.

Mr. Poston.

H. W. Poston

FEDERAL PRESENTATION

MR. POSTON: The Federal presentation will come in four short statements, the first by Merrill Gamet, our Regional Federal Activities Coordinator. His statement is going to be on the status of compliance of Federal installations.

Additionally Mr. Dale Bryson will make a statement on the monitoring program in the Minneapolis-St. Paul area for the period July 7, 1967, until June 30, 1969, and then Col. McGinnis, the District Engineer of the St. Paul District, has a statement for the Corps of Engineers, and lastly Mr. Donald Marshall, Water Hygiene representative of the Public Health Service, has a short statement.

Mr. Gamet.

STATEMENT OF MERRILL GAMET
REGIONAL FEDERAL ACTIVITIES COORDINATOR
GREAT LAKES REGION, FWPCA, CHICAGO, ILLINOIS

MR. GAMET: Chairman Stein, conferees, ladies and gentlemen.

This statement is a status of compliance report of Federal installations with the recommendations of the Upper Mississippi River Enforcement Conference.

Reports of progress made by Federal installations in the Upper Mississippi River Enforcement Conference Area with regard to compliance with the requirements of Executive Order 11288 and the conference recommendations have been made at previous sessions of the conference.

Recommendations for time schedules for remedial action at Federal installations, as stated in the Summary of Conference (Second Session), were that:

A. "operational and maintenance changes shall be initiated immediately." This has been complied with at all of the following installations:

1. Osceola Air Force Station, Polk County, Wisconsin.

2. U.S. Army, Corps of Engineers Dredge "W.A. Thompson".

3. U.S. Army, Corps of Engineers, Locks and Dams 1, 2 and 3.

4. U.S. Army, NIKE Site 20, Roberts, Wisconsin.

5. U.S. Army, NIKE Site 70, St. Bonifacius, Minnesota.

6. U.S. Army, NIKE Site 90, Bethel, Minnesota.

B. "changes required at the 934th Troop Carrier Group, Officers Club, Fort Snelling, be completed and made operational within six months." This has been complied with;

C. "a planned schedule of analyses be continued on effluent from the waste treatment facilities of the U.S. Army, Corps of Engineers, Floating Dredge Thompson, so as to insure adequate removals prior to overboard discharge of effluent." This has been complied with;

D. "changes required at NIKE Site 40 shall be completed and made operational within six months." This has not been complied with but the Summary Progress Evaluation Meeting of the conference, April 30, 1968, recommended that "the FWPCA request the Department of Defense to adjust and expedite the remedial schedule for NIKE Site No. 40 so that compliance will be achieved by the final June 17, 1971, deadline." In regard to NIKE Site No. 40, the Launch Area treatment system is in compliance. The waste effluent discharge to a ditch from the Administration and Control Area is not in compliance, since the extension of the sewer outfall has not been installed. Programming documents are now being prepared for inclusion of this project in the Department of Defense Fiscal Year 1972 Military Construction Program. Estimated completion date is May 1972. This installation will not be in compliance by the June 17, 1971, deadline.

E. "Federally-licensed (privately-owned) watercraft are to provide treatment satisfactory to the Federal Government as well as the State agencies." Inasmuch as there are no Federal laws regulating Federally-licensed watercraft, this report is confined to the following two Federally-owned crafts operating in the conference area:

No. 1. U. S. Coast Guard Buoy Tender "Fern", Home Port, Dubuque, Iowa:

This Federal vessel was not previously cited in conference reports. The vessel operates in the Upper Mississippi and Minnesota Rivers. It is equipped with a waste-holding tank with capacity for ten to twelve hours operation. The holding tank is used when the vessel is operating in the Minnesota River, but there is no shore pump-out facility available, and it is customary to dump the raw wastes in the Mississippi River. This vessel will not be considered in compliance until such time as a pump-out facility is available, or other adequate treatment facilities are installed. The Coast Guard has no additional plans at this time. It is recommended that a larger holding tank or acceptable treatment device be installed.

No. 2. U.S. Army, Corps of Engineers,

M. Gamet

Derrick Boat "767":

This vessel has not been previously cited in conference reports. The vessel is equipped with Macerator/Chlorinator units. Recent information indicates that coliform counts in the effluent are far in excess of acceptable limits, and therefore the facilities are not in compliance. The Corps of Engineers has been advised that Macerator/Chlorinators are not considered to provide acceptable treatment of vessel wastes, and that plans should be made to replace them. No information is available at this time of any plans to provide waste holding or other treatment facilities. It is recommended that this vessel install an acceptable treatment device at the earliest possible time.

This concludes the statement of the installations.

Inventory information regarding all Federal installations, including recommended improvements, completion of remedial measures, and effluent characteristics is shown in the table of Federal installations in the Enforcement Conference Area, this summary here.

That concludes our statement.

MR. STEIN: Without objection, that table will appear in the record as if read.

(Which said table is as follows:)

FEDERAL INSTALLATION SURFACE WATER DISCHARGE

in the

UPPER MISSISSIPPI RIVER DRAINAGE BASIN ENFORCEMENT CONFERENCE AREA

INSTALLATION (Agency & Location)	Receiving Waters (Basin)	Treatment Provided	Est. Pop. Served	Discharge Characteristics (mg/l)	Present Flow (1000 GPD)	*St of Comp an
MINNESOTA						
U.S. Army NIKE Minn.-St.Paul Site 40 Farmington (Dakota Co.)	Unnamed Creek (Vermillion River)	Admin. & Control Area: Secondary, chlorination	100	BOD_5 - 9.0 (95% reduction)	5.0	N.I.
	Ground	Launch Area: Septic tank, tile field	25		0.5	I.
U.S. Army NIKE Minn.-St.Paul Site #70 St.Bonifacius (Hennepin Co.)	Undrained swamp	Admin. & Control Area: Secondary, polishing lagoon, chlorination	100	BOD_5 - 7.0 (91% reduction - 6 mo. 6 mo. avg.)	-	I.
	Ground	Launch Area: Secondary, seepage lagoon	25	-	0.5	I.

* Status of Compliance (with Upper Mississippi River Enforcement Conference Recommendation

DERAL INSTALLATION SURFACE WATER DISCHARGES

in the

UPPER MISSISSIPPI RIVER DRAINAGE BASIN
ENFORCEMENT CONFERENCE AREA

July 1969

Discharge Characteristics (mg/1)	Present Flow (1000 GPD)	*Status of Compliance	Improvement Needs	Remedial Program	Remarks
BOD_5 - 9.0 (95% reduction)	5.0	N.I.C.	Extend sewer outfall	Funding - FY 1972. Est.Const complete 5/72	Effluent is discharged to a roadside ditch; complaints have been voiced by local residents on numerous occasions when odors developed as a result of ponding in the ditch. Programing documents are being prepared for inclusion of this project in the DOD, FY 1972 Military Construction Program.
	0.5	I.C.	None		
BOD_5 - 7.0 (91% reduction - 6 mo. 6 mo. avg.)	-	I.C.	1. Chlorination facilities. 2. Improved operation & control.	Completed Completed	Chlorination facilities are in year-round operation.
-	0.5	I.C.	Improved operation & control	Completed	No overflow from lagoon; package treatment plant underloaded.

ver Enforcement Conference Recommendations): I.C. - in compliance; N.I.C. - not in compliance

INSTALLATION (Agency & Location)	Receiving Waters Basin	Treatment Provided	Est. Pop. Served	Discharge Characteristics (mg/l)	Present Flow (1000 GPD)	*Statu of Compli- ance
MINNESOTA, Cont'd.						
U.S. Army NIKE Minn.-St.Paul Site #90 Bethel (Isanti Co.) Admin. & Control Area	Trib. of Rum River	Admin. & Control Area: Secondary, chlorination	100	BOD_5 - min. - 11)June'69 max. - 31) 87% reduction (6 mo. average)	5.0	I.C.
	Ground	Launch Area: Septic tank & tile drain field	25	-	0.5	I.C.
U.S. Air Force 934th Troop Carrier Group, Officers Club Fort Snelling	Marsh near Minnesota River	Two compartment septic tank and soil absorption field			3.7	I.C.
WISCONSIN						
U.S. Army NIKE Minn.-St.Paul Site #20 Roberts (St.Croix Co.)	Ground	Admin. & Control Area: Secondary, polishing lagoon	100	No discharge from lagoon	5.0	I.C.
	Ground	Launch Area: Septic tank, tile field	25	-	0.5	I.C.

Discharge Characteristics (mg/l)	Present Flow (1000 GPD)	*Status of Compliance	Improvement Needs	Remedial Program	Remarks
BOD$_5$ - min. - 11)June'69 max. - 31) 87% reduction (6 mo. average)	5.0	I.C.	1.Filter recirculation 2.Improved operation & control	Completed in 1966 Completed in 1968	Chlorination facilities were activated in 1967
-	0.5	I.C.	None	-	
	3.7	I.C.	None	None	Enforcement Conference recommendations were carried out in the fall of 1966.
No discharge from lagoon	5.0	I.C.	Improved operation & control	Completed	Deactivation of this site is contemplated within several years
-	0.5	I.C.	None	-	

INSTALLATION (Agency & Location)	Receiving Waters Basin	Treatment Provided	Est. Pop. Served	Discharge Characteristics (mg/1)	Present Flow (1000 GPD)	*Sta o Comp an
WISCONSIN, Cont'd.						
U.S. Air Force Osceola Air Force Sta. (Polk County)	Ground	S.T., tile drain field at Transmitter and Receiver Sta.		-	24.0 total from station	I.
		Main Station - 2 - 20150 gal. septic tanks, 2 oxidation ponds in series.		No overflow from second oxidation pond.		I.
U.S. Coast Guard Buoy Tender "Fern"	Miss. River	Holding tank, with capacity for 10-12 hours operation	20	Raw	-	N.I
U.S. Army - Corps of Engineers Dredge W.A.Thompson	Miss.River	2 - extended aeration plants - 1200 gal/day unit, 1 unit forward, 1 unit aft; effluent chlorination	56	Analysis of samples taken 6/18/69 Forward / Aft S.S. 65 mg/1. 29 mg/1 B.Coli 2300/100 ml 2600/100 ml BOD 35 mg/1 30 mg/1 pH 7.6 7.3	2.0	I.C.
Derrick Boat 767	Miss.River	Macerator-chlorinator	26	Sample collected on 6/30/69 showed coliform count of 160,900/100 ml	0.5	N.I

st. p. rved	Discharge Characteristics (mg/l)	Present Flow (1000 GPD)	*Status of Compli-ance	Improvement Needs	Remedial Program	Remarks
	-	24.0 total from station	I.C.	None	-	Continue maintenance practices to assure adequate treatment efficiency.
	No overflow from second oxidation pond.		I.C.	None	-	Operation and maintenance practices adequate.
20	Raw	-	N.I.C.	Shore facility to pump out holding tank	None	Home Port is Dubuque, Iowa. Operates in Mississippi and Minnesota Rivers. Holding tank is used when operating in the Minnesota River, and evacuated into the Mississippi River.
56	Analysis of samples taken 6/18/69 Forward / Aft S.S. 65 mg/l. / 29 mg/l B.Coli 2300/100 ml / 2600/100 ml BOD 35 mg/l / 30 mg/l pH 7.6 / 7.3	2.0	I.C.	None	-	Home Port is Fountain City, Wisconsin
26	Sample collected on 6/30/69 showed coliform count of 160,900/100 ml	0.5	N.I.C.	Acceptable Treatment or disposal device.		Closer attention must be paid to adequacy of chlorination

MR. STEIN: Are there any comments or questions?

MR. GADLER: I would like to ask a question, Mr. Chairman.

MR. STEIN: Yes.

MR. GADLER: I want to know why the Federal Government can't comply with the laws of our Nation. I wish somebody would answer that.

MR. STEIN: What are you referring to on this?

MR. GADLER: Well, take a look at item number D. It said the installation will not be in compliance until May 1972. Certainly a Nation that can afford the money they do for the things they do can afford to spend a little money to clean up a NIKE installation.

MR. STEIN: I agree with you on that. This was one of the questions that I had.

Before we get into that, let me ask Mr. Gamet a question. What is the population equivalent and what is being discharged at that site which will not be in compliance?

MR. GAMET: Well, NIKE Site 40 it is estimated has approximately one hundred population and a daily flow of about five thousand gallons of waste.

MR. STEIN: If you look at the answer to that question and you ask about the government, I think the only way that I know how to handle it is that, at least in a free society like ours, there is no dichotomy as far as I can see and no split between the government and the people sitting here and the people sitting in the audience. We are the government. And if you want something done, it will be done.

When we deal with any law, there are fairly traditional and clear rules of statutory construction. This has been well known not only by the founding fathers but by the Congress and by the governments such as the British Government and possibly some other western European Governments from which we derived our traditions when the constitution was drafted and we embarked on our role as a Nation. One of these fundamental rules of statutory construction is that unless specifically so stated, the sovereign does not regulate itself.

In some areas where there has been a lot of pressure, for example in the Oil Pollution Control Act of 1924, the definition of person includes any agent, employee or officer of the United States. In the Water Pollution Control Act the definition does not include the United States.

This is a statute that the Congress has passed. In recognition of this omission, the Executive Orders emanating from the White House have set up a directive asking all Federal agencies to comply with State and Federal water pollution control requirements. Again, this requirement by its very nature is by its very nature essentially a voluntary one, because while we may be able to bring legal action from our Department or ask the Justice Department to do that against an industry or a city or a State, it is pretty clear that we can't do it against another Federal agency. This is the way the law is written and we have to work this out.

Now, again, if you would look at this date, the problem seems to come from the appropriation of funds. And again the appropriation of funds or what you get for any particular project as a governmental agency, it seems to me, relates to all of us in our society. Our position, I think, and the only thing that any of us can do--this pertains to dealing with either State or Federal Governments--is to enforce the law as we have it. Under the law the appeal here has to be made through the agency, through the Congress and through the budgetary process.

MR. GADLER: Mr. Stein.

MR. STEIN: Yes.

MR. GADLER: Here is an estimated population of one hundred that are dumping effluent into a roadside ditch. Citizens of our State have complained on numerous occasions about the odors. I don't know whether the health authorities have gone down to examine the possibilities of disease, but certainly I don't understand as an individual why we should wait until 1972 for somebody to take some action to take care of the people in that area. They are complaining about odors and they are complaining about an action by the Federal Government.

Certainly someone should say, "You comply." We are forcing small industries and small people and small municipalities in this State to do it. I believe that the Federal Government, of which I am one part of it or one individual in that institution, certainly should comply, and that includes the--

MR. STEIN: I think Col. McGinnis will be making a statement and perhaps he will have something more to say on this.

Are there any more questions or comments?

MR. BADALICH: Mr. Chairman, I have one.

MR. STEIN: Yes.

MR. BADALICH: This is referring to page 3 regarding the Derrick Boat "767." Reference is made in this statement that the Corps of Engineers have been advised that macerator/chlorinators are not considered to provide acceptable treatment. Whose advice was this, I would like to know? Because the State of Minnesota does consider this type of device as acceptable as a boat head and also the National Science Foundation, which is a Federal agency that does look into the design and acceptance of boat heads, does approve this type of device. I would like to know where the Corps of Engineers got this advice as to not being acceptable.

MR. GAMET: That came from us, from the FWPCA.

MR. BADALICH: I see.

MR. STEIN: Are there any further questions?

Well, I have this, and I think about the "Fern" too. As I understand the situation in the "Fern," the vessel may operate in the Minnesota River and they don't dump, but it is customary to dump the raw wastes into the Mississippi River because there are no pump-out facilities on shore. One of the recommendations is that they have a larger holding tank. What is the point of the larger holding tank if they are going to dump it in the river?

MR. GAMET: Well, the only consideration there was that they would be able to hold all their wastes until they return to their home port rather than to dump in the Mississippi River after coming out of the Minnesota River.

MR. STEIN: What will they do when they return to the home port? Do they have a pump-out facility there?

MR. GAMET: I am not sure. I believe there is a pump-out facility at Dubuque, but that is a long ways down river from Minnesota.

MR. STEIN: You are going to need an awfully large tank.

MR. GAMET: Well, they have a complement of, I believe, about twenty men.

MR. WISNIEWSKI: Mr. Chairman.

MR. STEIN: Yes.

MR. WISNIEWSKI: With reference to pump-out facilities, I am quite sure there are plenty of portable units available which are presently used for pumping out septic tanks and hauling wastes away. Why can't the unit contract for services of this type for pumping-out purposes?

MR. GAMET: I see no reason why they shouldn't. And if there are such available, we would like to know where they are so we can make a recommendation to the--

MR. WISNIEWSKI: We will be glad to send you a list of licensees in Wisconsin. We have them licensed all over the State.

MR. GAMET: Very good. I am very happy to know that.

MR. STEIN: Let's keep that in mind for the recommendations, because I think Mr. Wisniewski kind of anticipated the line of inquiry that I had. I see no reason why, if you are going to have a holding tank operation with the facilities that we have in the area, that arrangements can't be made for adequate pump-out.

MR. GAMET: If these facilities are available, this, in my opinion, is by far the best solution--

MR. STEIN: Right.

MR. GAMET: --and we will be happy to have the information.

MR. STEIN: Do you have any date on that Derrick Boat "767"?

MR. GAMET: No, sir, I am sorry, we were unable to get any data.

MR. STEIN: Not data, date.

MR. GAMET: Oh.

MR. STEIN: If they are going to stop using the macerator/chlorinator and put in a holding tank, again I would hope that they made arrangements for a pump-out on the holding tank, do you have any date when they are supposed to do that?

MR. GAMET: Well, I think Col. McGinnis could give us an answer on that.

MR. STEIN: Thank you.

Are there any further comments or questions?

Mr. Tuveson.

MR. TUVESON: Mr. Gamet, will you furnish Minnesota a copy of your recommendations regarding the macerator/chlorinators, please?

MR. GAMET: Yes, sir.

MR. TUVESON: Thank you.

MR. STEIN: Are there any further comments or questions?

If not, thank you very much, Mr. Gamet.

That was an excellent report, by the way. Again, I know Mr. Gamet works for us, but as far as conciseness and putting your finger on the facts, that is as good a Federal installation report as I have seen. Thank you very much.

MR. GAMET: Thank you, Mr. Stein.

MR. STEIN: Mr. Poston.

MR. POSTON: Next Mr. Dale Bryson is going to present a summary report on the monitoring program in this area.

STATEMENT OF DALE S. BRYSON
DIRECTOR, UPPER MISSISSIPPI RIVER - LAKE SUPERIOR BASIN OFFICE, FWPCA,
MINNEAPOLIS, MINNESOTA

MR. BRYSON: Mr. Chairman, conferees.

My name is Dale S. Bryson. I am the Director of the Upper Mississippi River - Lake Superior Basin Office, Federal Water Pollution Control Administration.

The Federal Water Pollution Control Administration was charged under recommendation No. 6 to establish monitoring stations where appropriate within the study area to aid in the evaluation of improvement of water quality resulting from implementation of actions recommended by the conferees.

D. S. Bryson

Pursuant to the recommendation, three locations for automatic water quality monitoring facilities were selected. These are strategically located to surround the areas of poorest water quality in the vicinity of the Twin Cities. A constant vigil of Mississippi River water quality, entering the metropolitan area, is maintained by the control monitor located in north Minneapolis at the Northern States Power Company's Riverside Power Plant. A second monitor is located on the Minnesota River three and one-half miles above its confluence with the Mississippi River. The third monitor is located at the J. L. Shiely Larson Plant downstream from all waste sources and records the water quality of the Mississippi River as it leaves the Twin Cities area. Thus, changes in the water quality of the Mississippi River as it passes through the Twin Cities are constantly recorded, permitting continuing evaluation of the improvements in water quality anticipated with implementation of the recommendation.

These monitors are shown on the map with the circles of the central receiving plants located at our office in Minneapolis.

The automatic monitors were placed in operation during July 1967 and with a minimum of down time have satisfactorily operated continuously. Water is pumped through the monitors and is analyzed by four different sensors for temperature, dissolved oxygen, hydrogen ion concentration and specific conductance. The equipment has been designed to accommodate four additional analyses as sensors are developed and become available.

The information collected by the monitors is telemetered to a central recorder located at the Federal Water Pollution Control Administration Minneapolis Office. The maximum and minimum value recorded for each analysis is tabulated on a daily basis. Copies of this data are forwarded routinely to the Minnesota Pollution Control Agency, the Division of Environmental Protection, Wisconsin Department of Natural Resources, and the Minneapolis-St. Paul Sanitary District. The data are summarized in graph form and are available for public information, as are all raw data.

Copies of the summaries are before you for the two years the monitors have been in operation.

I would like to have these data entered into the record.

The overall quality of the water in the Twin Cities metropolitan area, as evidenced by the graphs of data obtained from the three automatic water quality monitors, is slightly improved.

MR. STEIN: Mr. Bryson, I am not sure we have this data for the two years.

MR. BRYSON: This is the packet that was placed before you before we started this morning.

MR. PACKARD: Oh, here. I see.

MR. STEIN: All right, this will appear in the record as if read, without objection.

(Which said data summary is as follows:)

DATA SUMMARY

July 7, 1967 - June 30, 1969

AUTOMATIC MONITORING PROGRAM

MINNEAPOLIS - ST. PAUL AREA

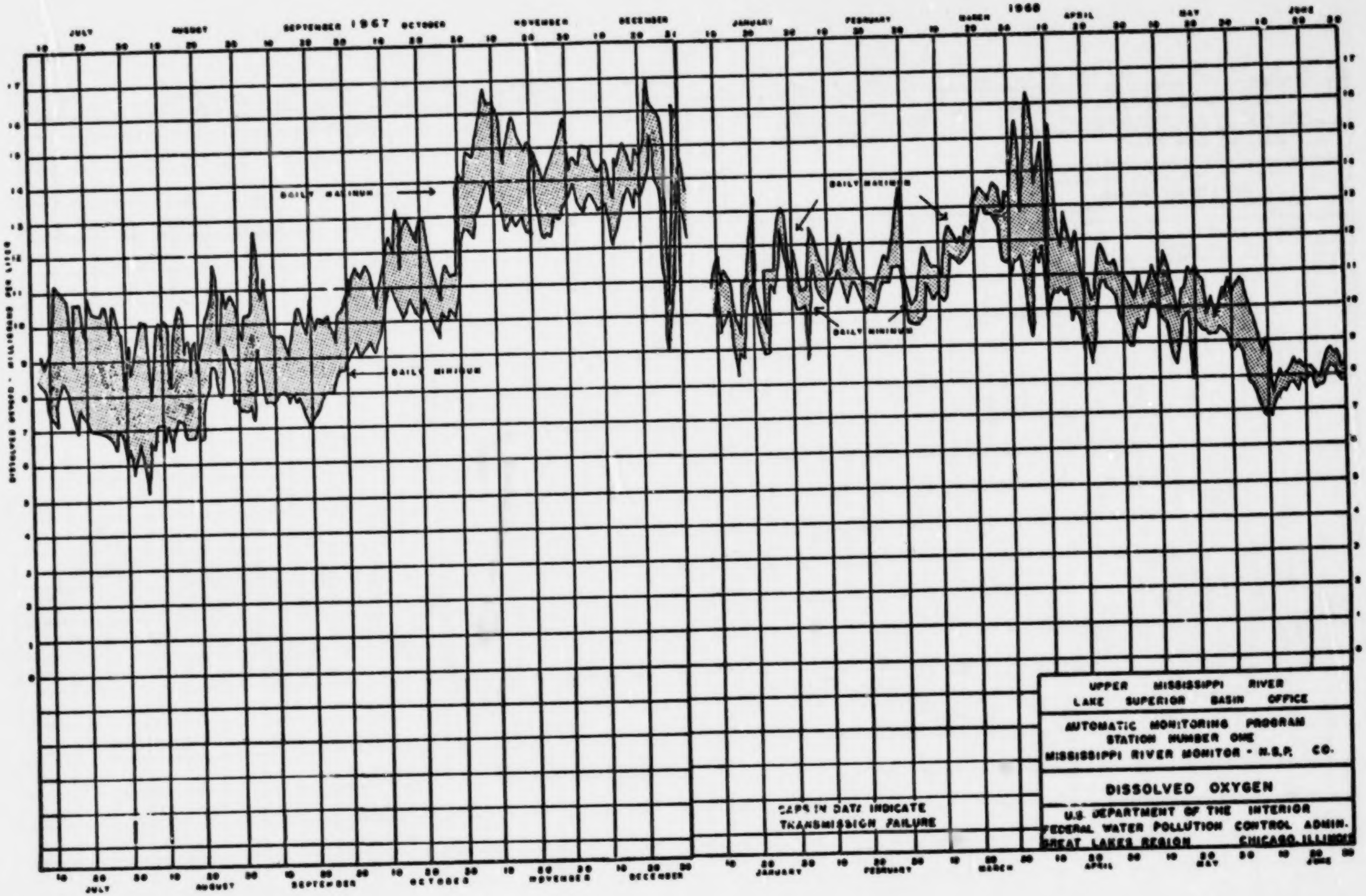
U. S. Department of the Interior
Federal Water Pollution Control Administration
Great Lakes Region
Upper Mississippi River -
Lake Superior Basin Office

The overall quality of the water in the Twin Cities metropolitan area, as evidenced by the graphs of data obtained from the three automatic water quality monitors, is slightly improved. The Mississippi River as it enters the Twin Cities (Monitor No. 1) is of good quality. The water quality parameters measured consistently exceeded minimum requirements. The quality of the Minnesota River, immediately above its confluence with the Mississippi River (Monitor No. 3) has shown some improvement. Minimum dissolved oxygen requirements were not met at all times in 1967 and 1968, however, improvement was noted in 1969, due to the installation of waste treatment facilities at several of the waste sources. The quality of the Mississippi River as it leaves the Twin Cities (Monitor No. 2) has also shown slight improvement. In the summer and early fall of 1967 the dissolved oxygen was consistently depleted. While the minimum dissolved oxygen requirement of 3 milligrams per liter (mg/l) was violated in 1968 the level did not drop below 1 mg/l. The water quality to date in 1969 has been above minimum requirements, principally due to high river flows.

AUTOMATIC MONITORING STATION NO. 1

MISSISSIPPI RIVER - MILE 856.9

NORTHERN STATES POWER CO. - RIVERSIDE PLANT

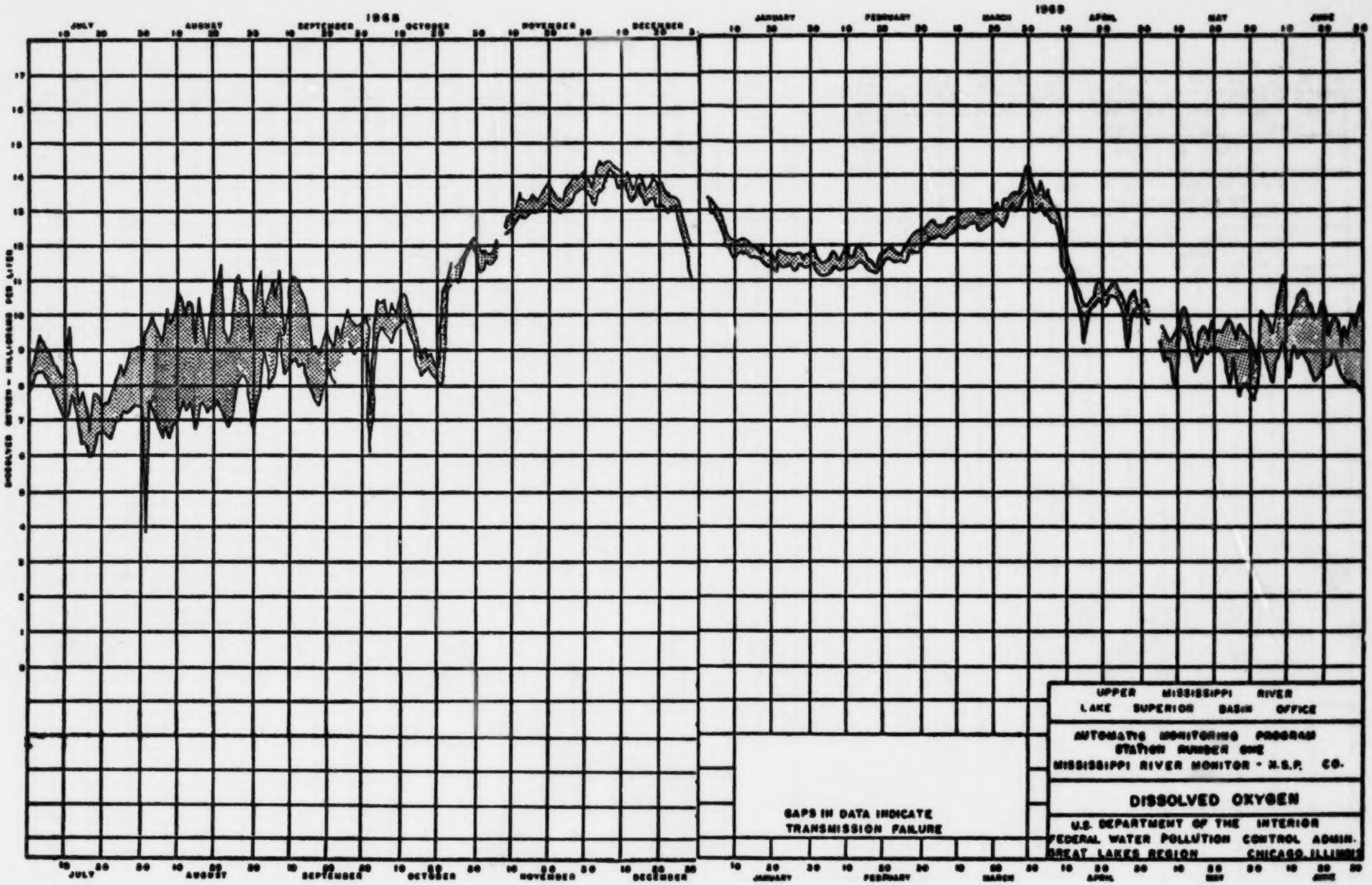


UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

AUTOMATIC MONITORING PROGRAM
STATION NUMBER ONE
MISSISSIPPI RIVER MONITOR - N.S.P. CO.

DISSOLVED OXYGEN

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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GAPS IN DATA INDICATE
TRANSMISSION FAILURE
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER ONE
MISSISSIPPI RIVER MONITOR - N.S.P. CO.
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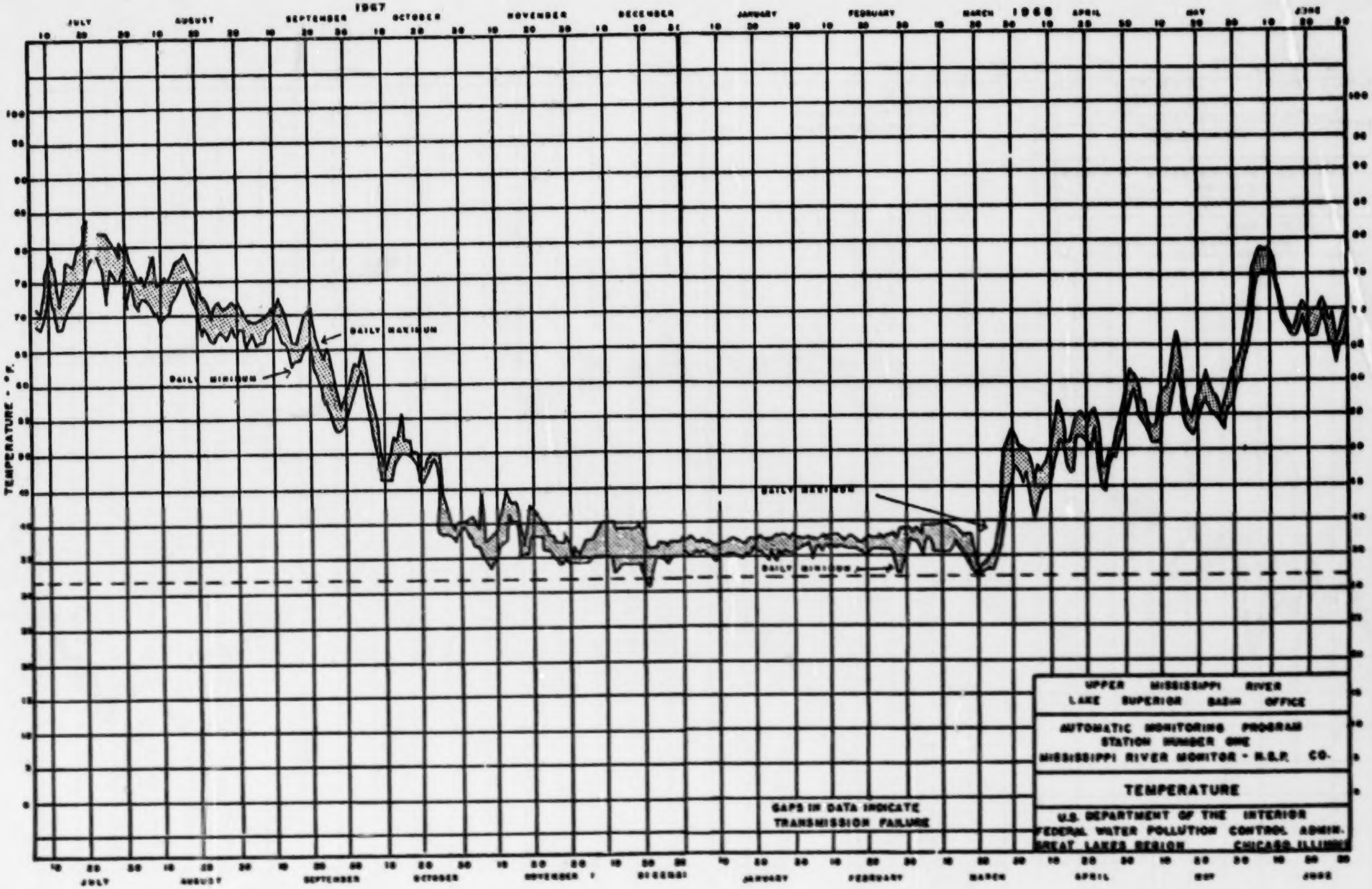
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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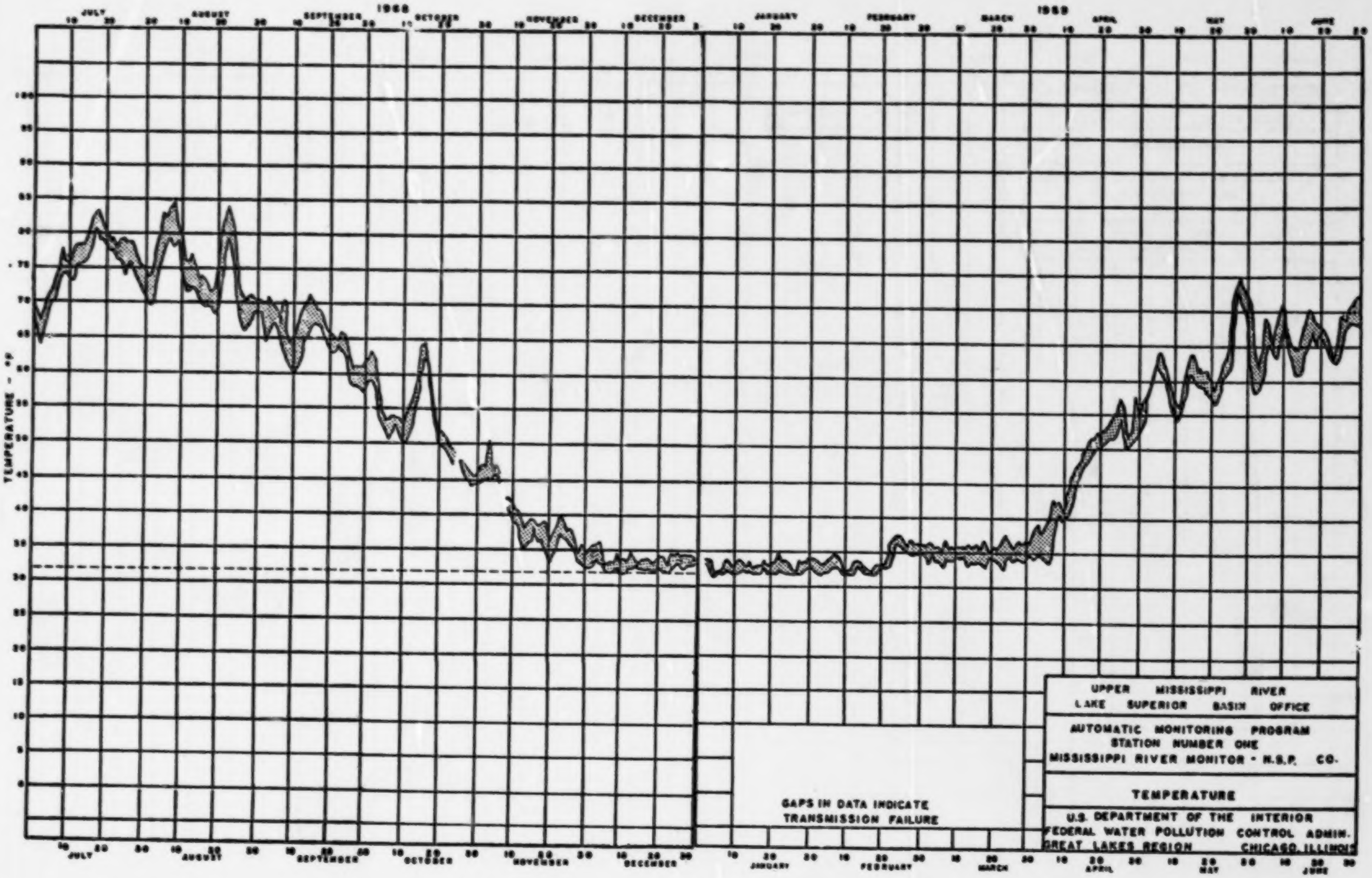
GAPS IN DATA INDICATE
TRANSMISSION FAILURE
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER ONE
MISSISSIPPI RIVER MONITOR - N.S.P. CO.
TEMPERATURE
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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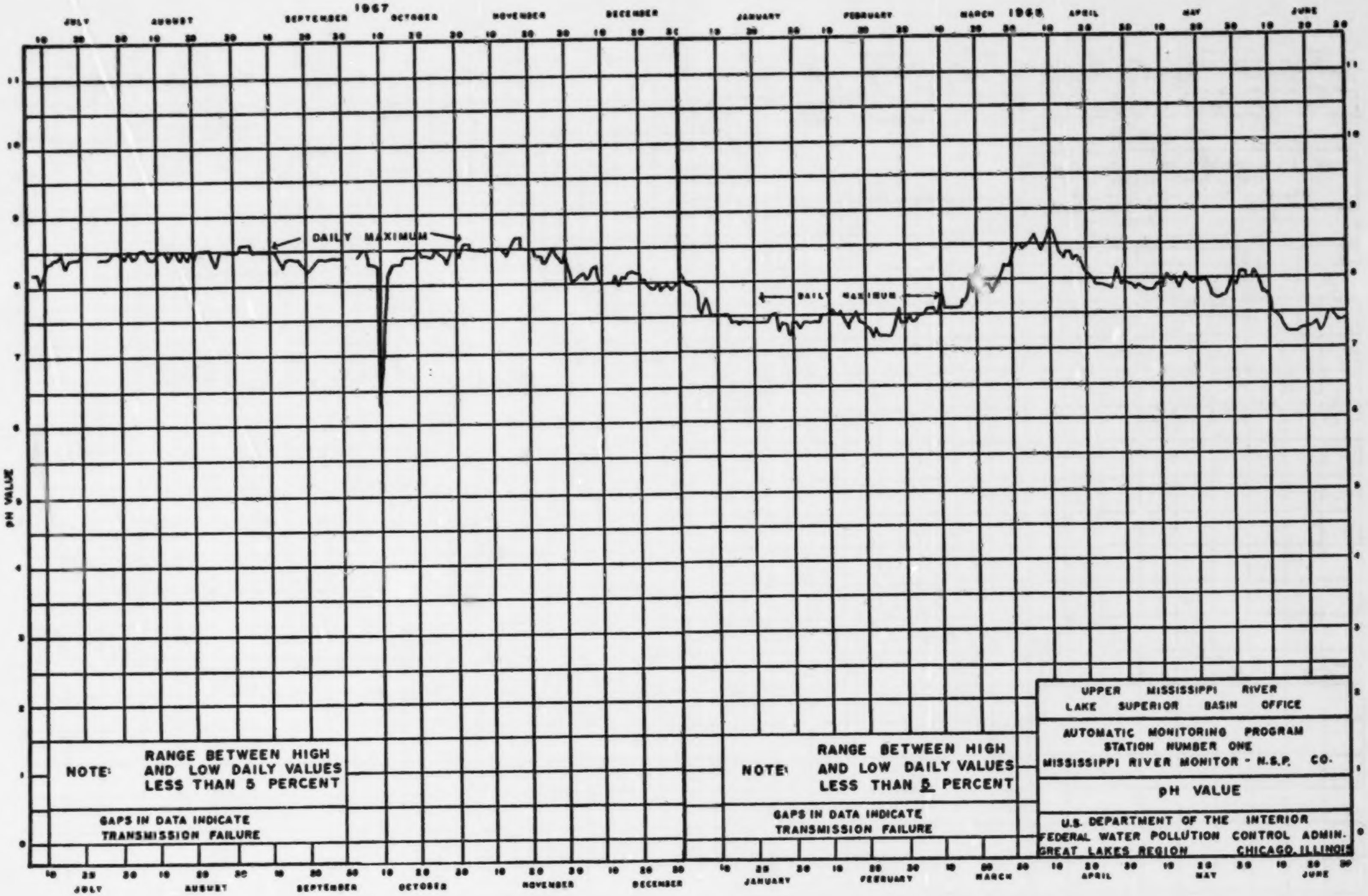
GAPS IN DATA INDICATE
TRANSMISSION FAILURE
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER ONE
MISSISSIPPI RIVER MONITOR - N.S.P. CO.
TEMPERATURE
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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DAILY MAXIMUM
NOTE: RANGE BETWEEN HIGH AND LOW DAILY VALUES LESS THAN 5 PERCENT
GAPS IN DATA INDICATE TRANSMISSION FAILURE
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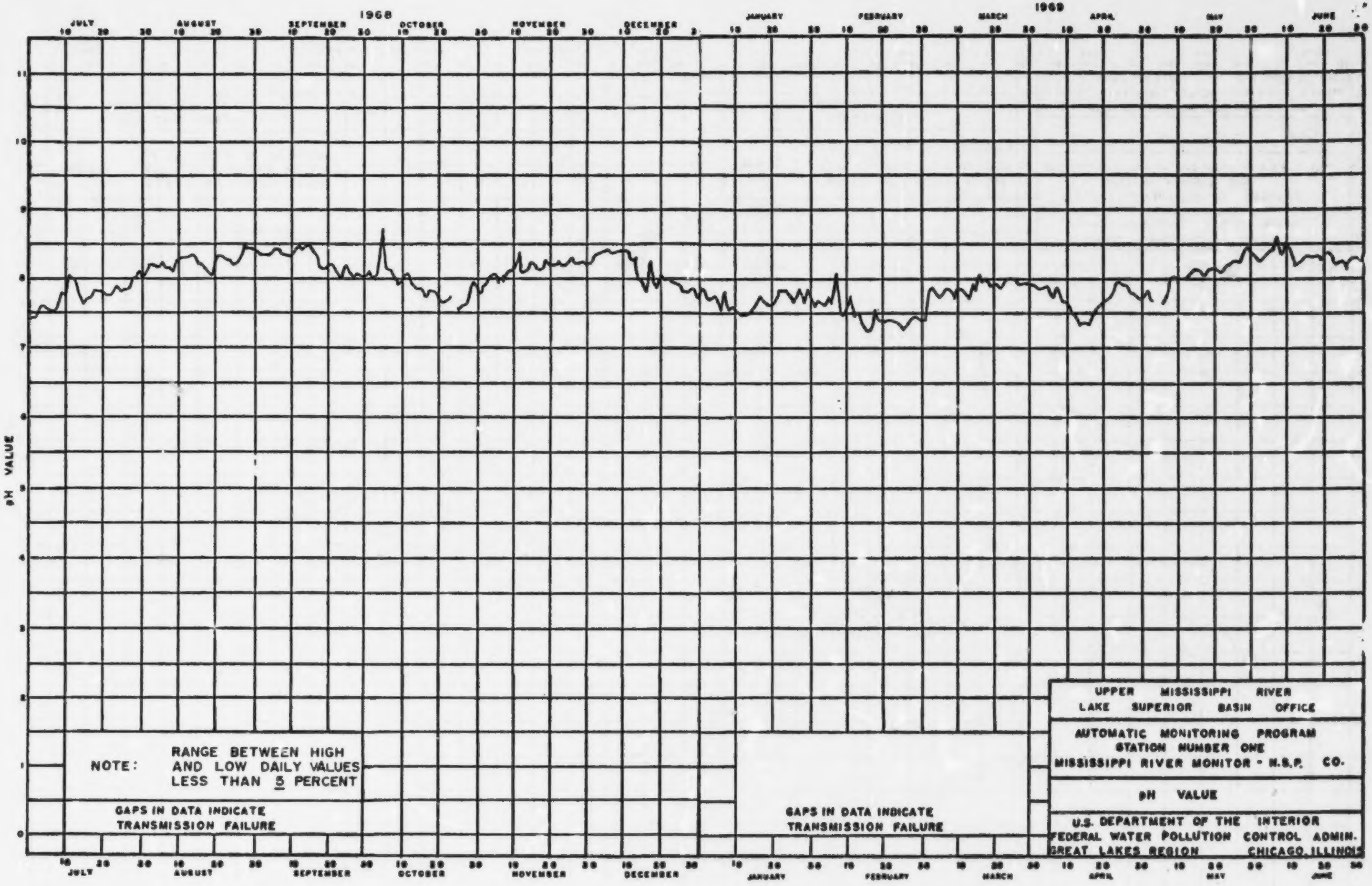
GAPS IN DATA INDICATE TRANSMISSION FAILURE
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER ONE
MISSISSIPPI RIVER MONITOR - N.S.P. CO.
pH VALUE
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS



UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

AUTOMATIC MONITORING PROGRAM
STATION NUMBER ONE
MISSISSIPPI RIVER MONITOR - N.S.P. CO.

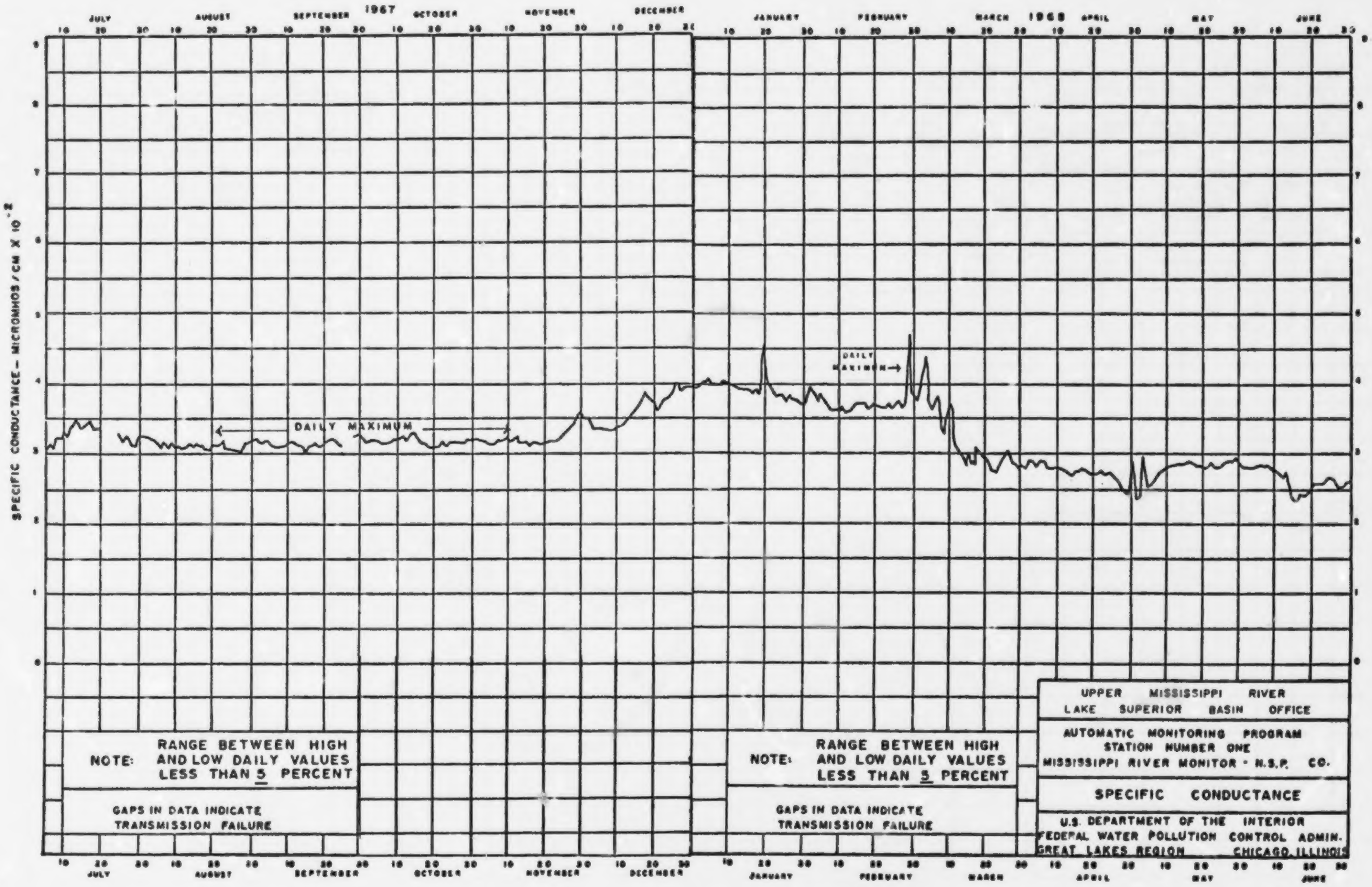
pH VALUE

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS

NOTE: RANGE BETWEEN HIGH AND LOW DAILY VALUES LESS THAN 5 PERCENT

GAPS IN DATA INDICATE TRANSMISSION FAILURE

GAPS IN DATA INDICATE TRANSMISSION FAILURE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NOTE: RANGE BETWEEN HIGH AND LOW DAILY VALUES LESS THAN 5 PERCENT
GAPS IN DATA INDICATE TRANSMISSION FAILURE
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GAPS IN DATA INDICATE TRANSMISSION FAILURE
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LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER ONE
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SPECIFIC CONDUCTANCE
U.S. DEPARTMENT OF THE INTERIOR
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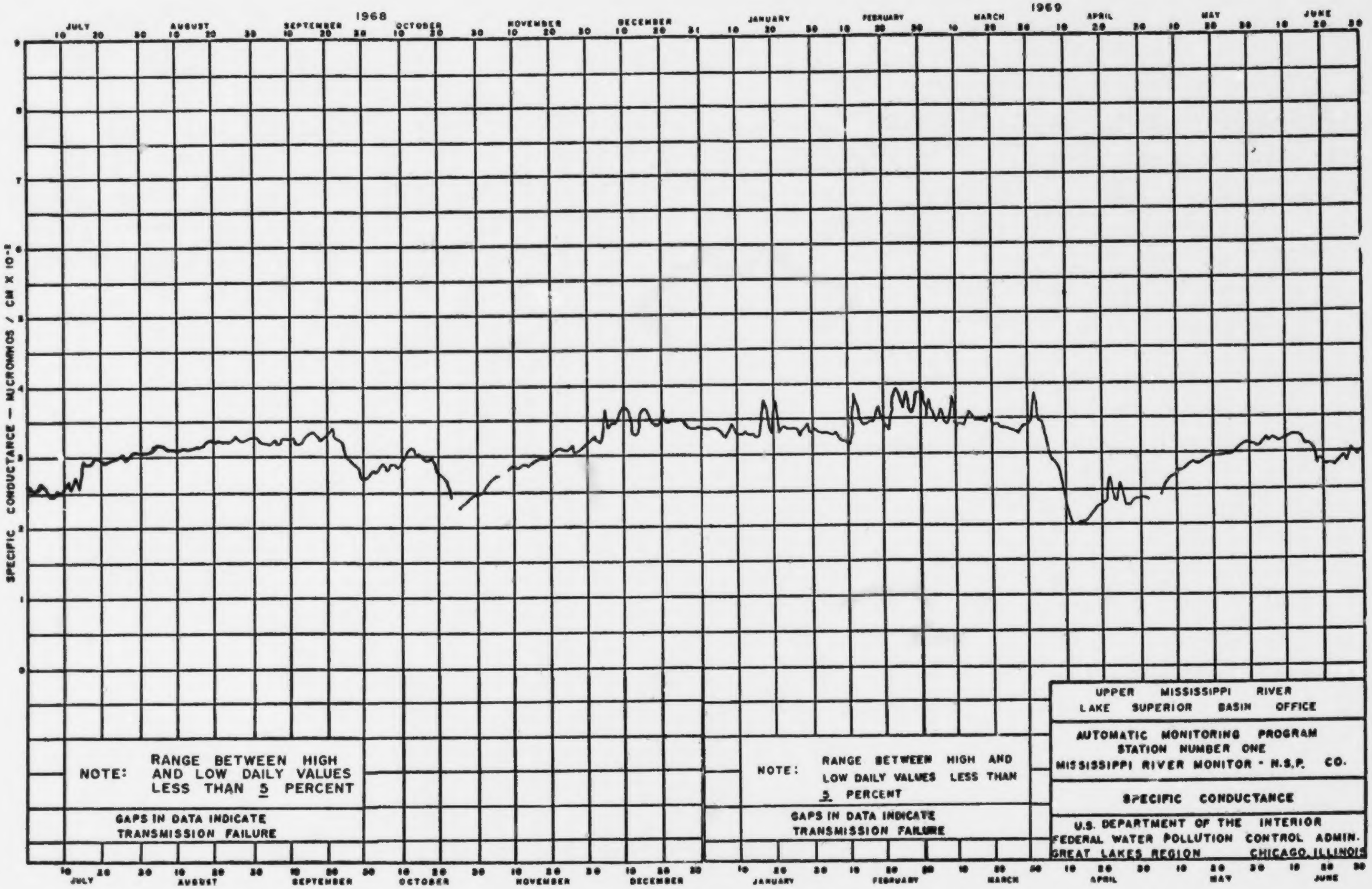
GREAT LAKES REGION CHICAGO, ILLINOIS



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GAPS IN DATA INDICATE TRANSMISSION FAILURE

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GAPS IN DATA INDICATE TRANSMISSION FAILURE

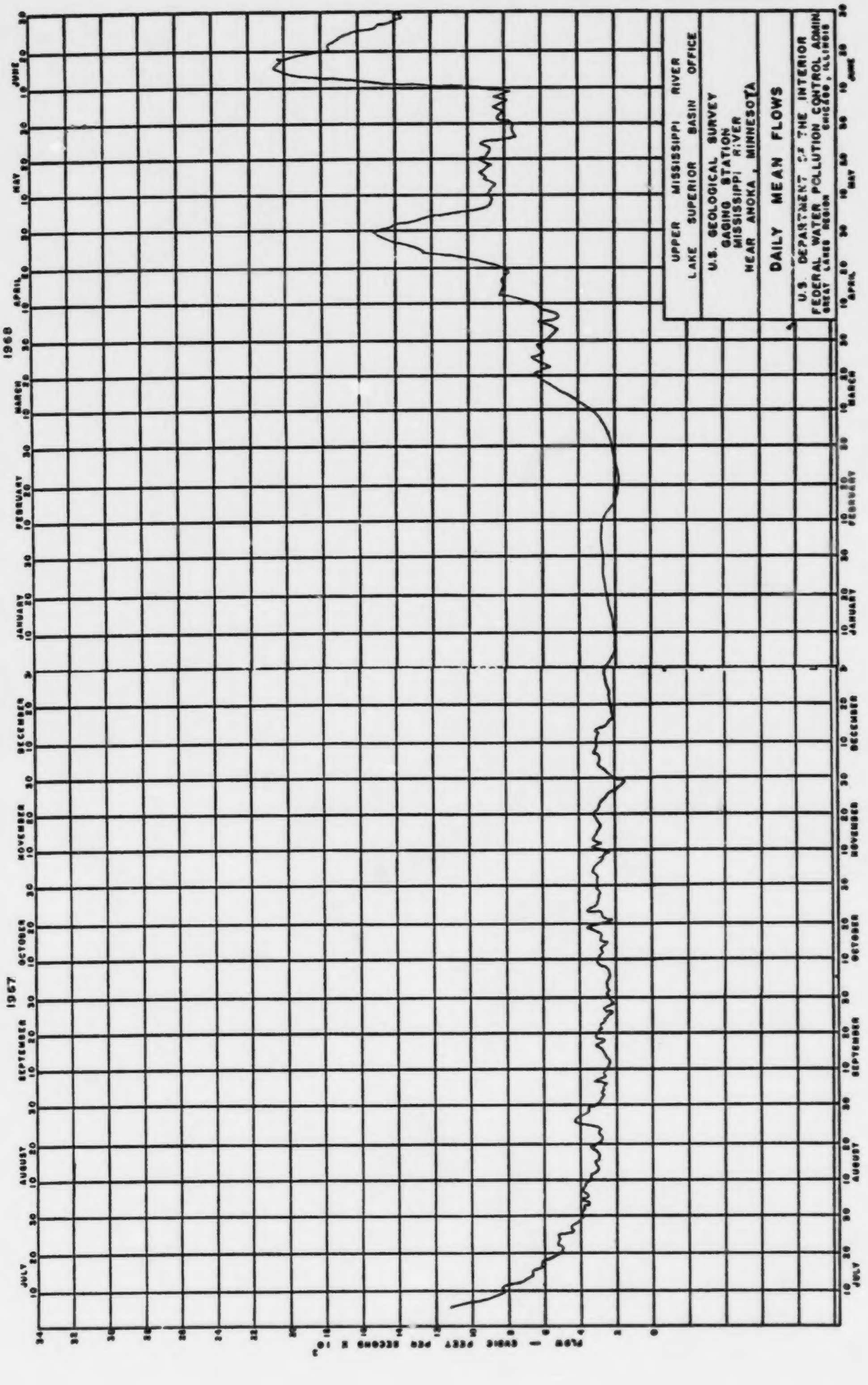
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

AUTOMATIC MONITORING PROGRAM
STATION NUMBER ONE
MISSISSIPPI RIVER MONITOR - N.S.P. CO.

SPECIFIC CONDUCTANCE

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS

44


UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
U.S. GEOLOGICAL SURVEY
GAGING STATION
MISSISSIPPI RIVER
NEAR ANOKA, MINNESOTA
DAILY MEAN FLOWS
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION
CHICAGO, ILLINOIS
1967
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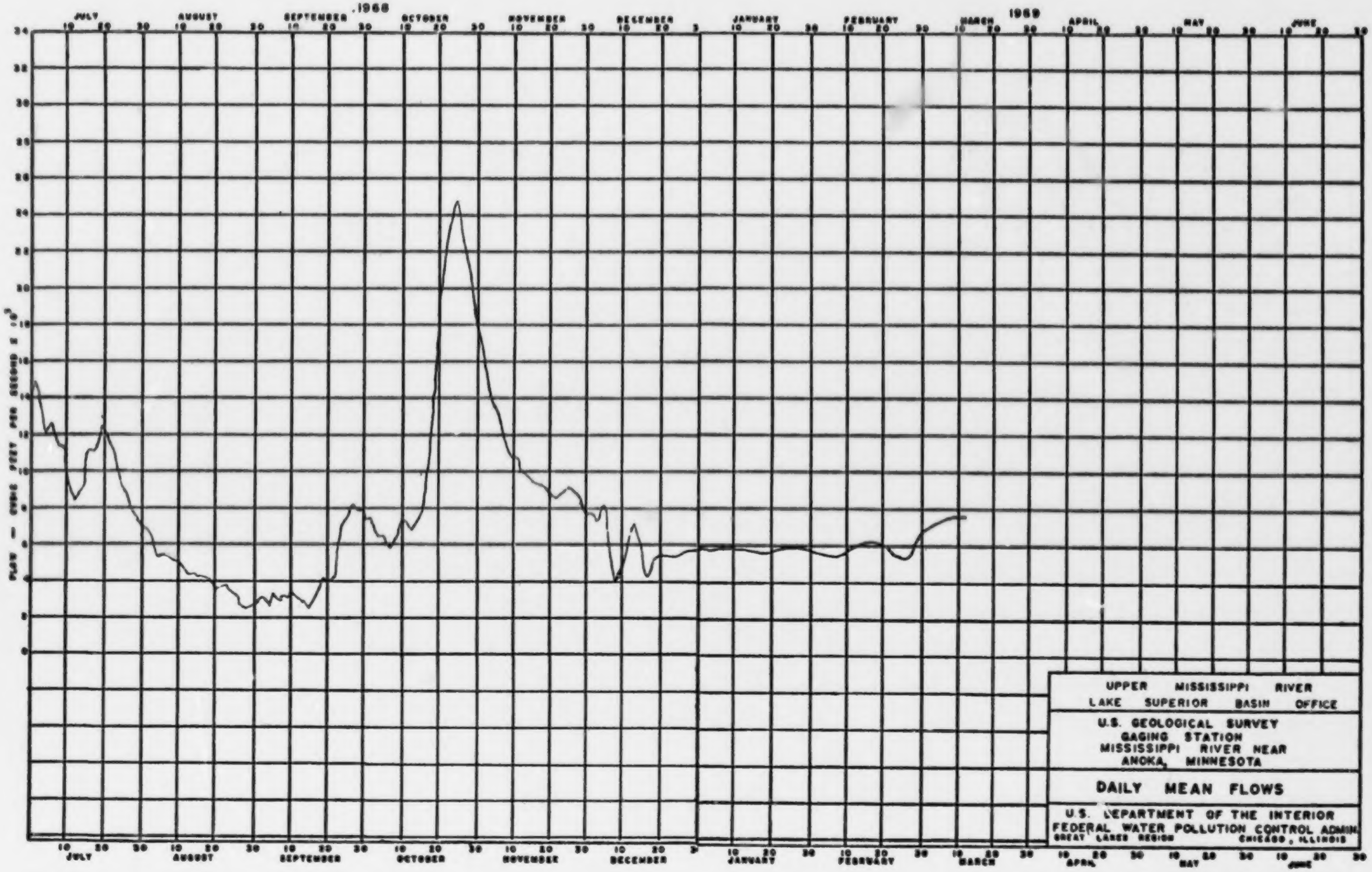


UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

U.S. GEOLOGICAL SURVEY
GAGING STATION
MISSISSIPPI RIVER NEAR
ANOKA, MINNESOTA

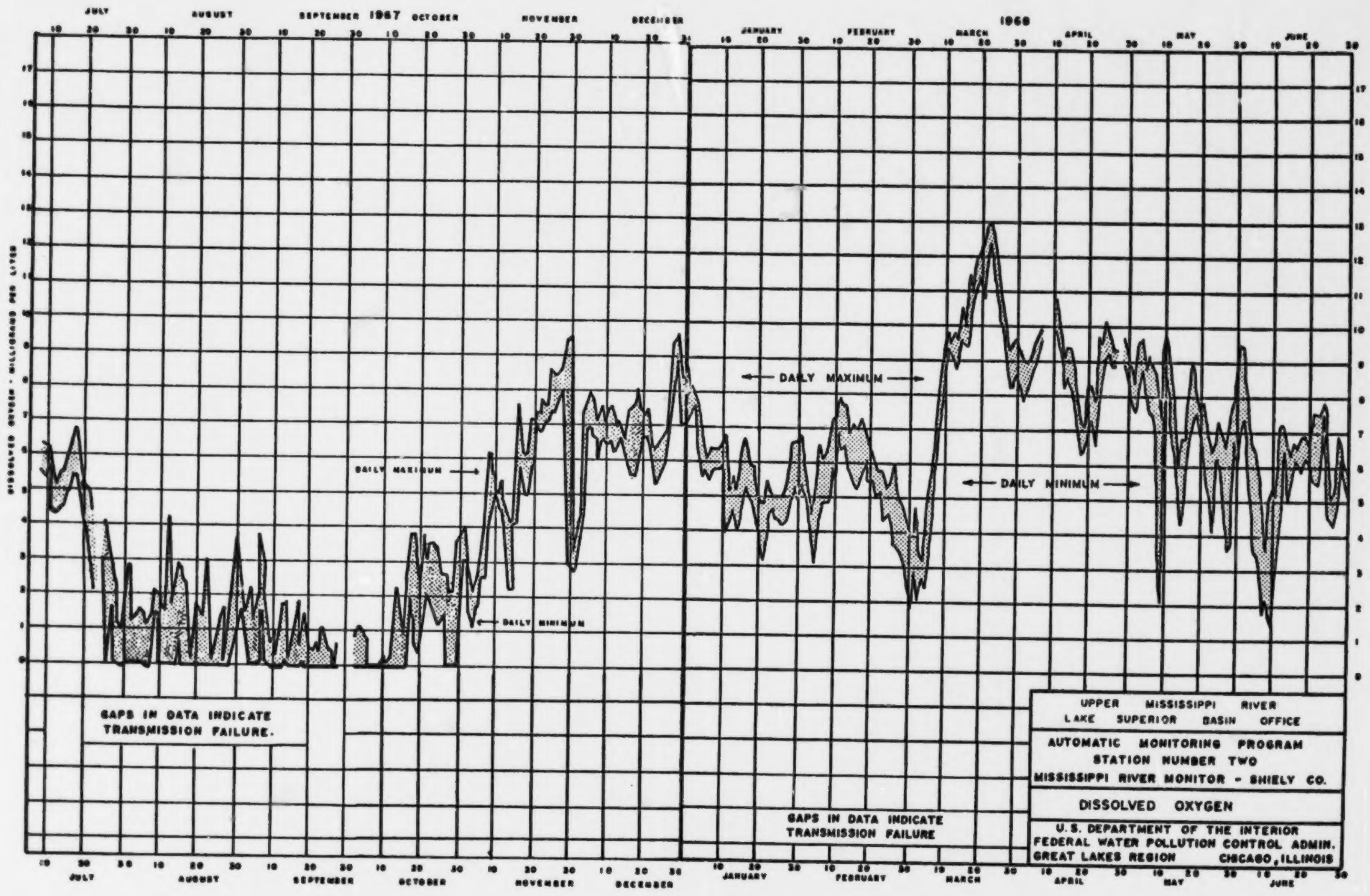
DAILY MEAN FLOWS

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS

AUTOMATIC MONITORING STATION NO. 2

MISSISSIPPI RIVER - MILE 826.7

J. L. SHIELY CO. - LARSON PLANT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STATION NUMBER TWO
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DISSOLVED OXYGEN
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS
DISSOLVED OXYGEN - MILLIGRAMS PER LITER
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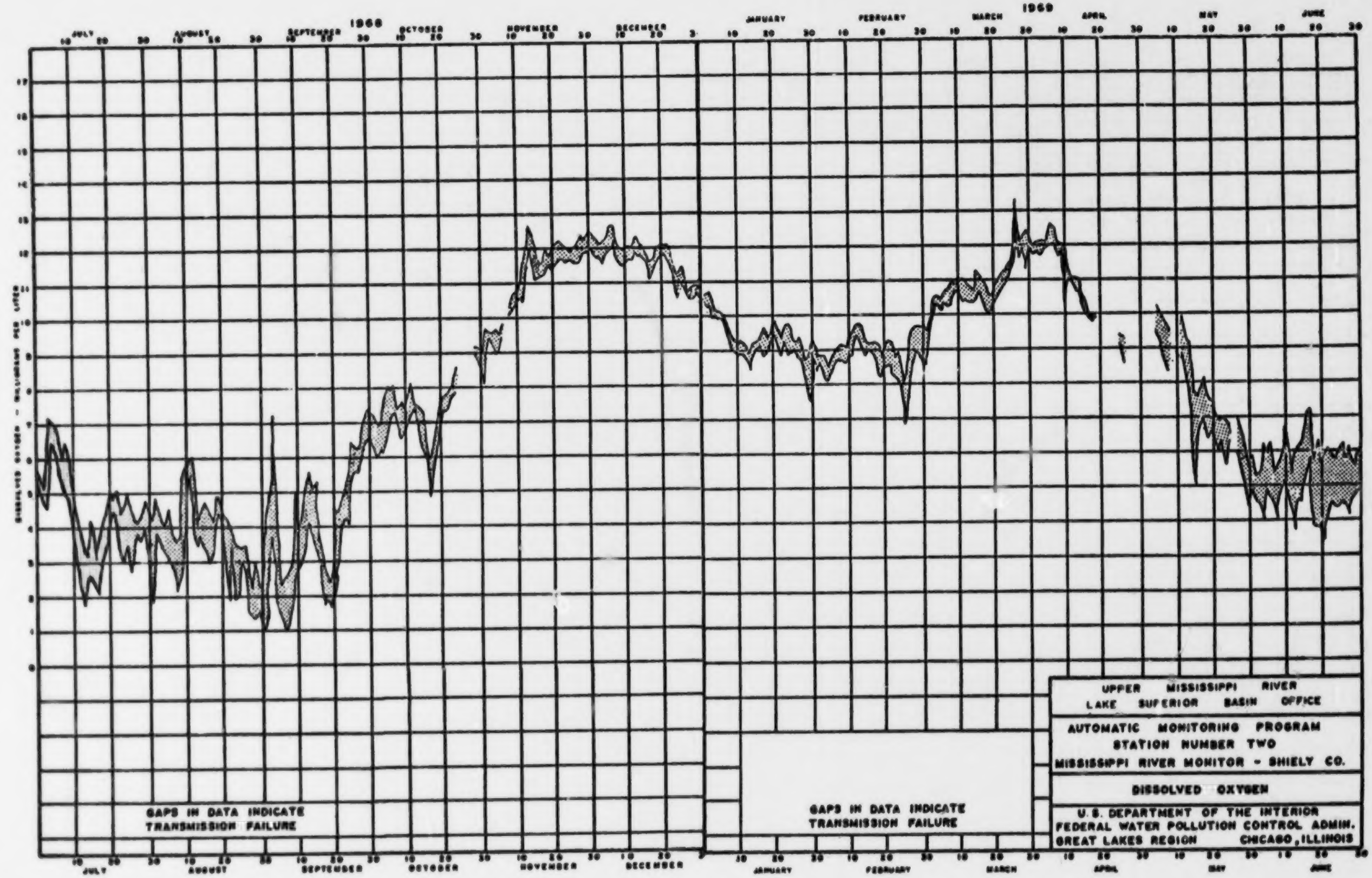
GAPS IN DATA INDICATE TRANSMISSION FAILURE.
GAPS IN DATA INDICATE TRANSMISSION FAILURE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UPPER MISSISSIPPI RIVER
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AUTOMATIC MONITORING PROGRAM
STATION NUMBER TWO
MISSISSIPPI RIVER MONITOR - SHIELY CO.
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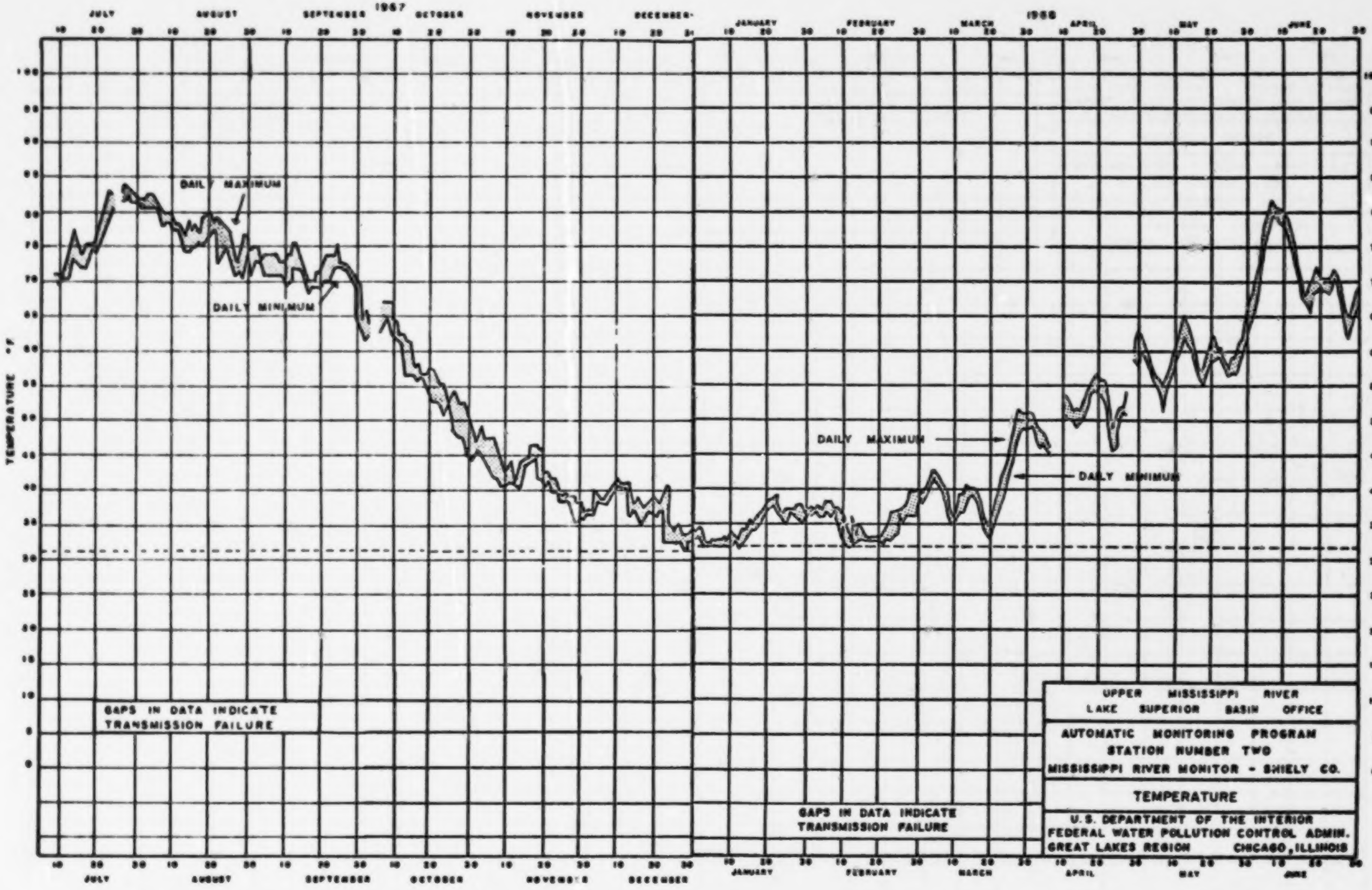
GREAT LAKES REGION CHICAGO, ILLINOIS

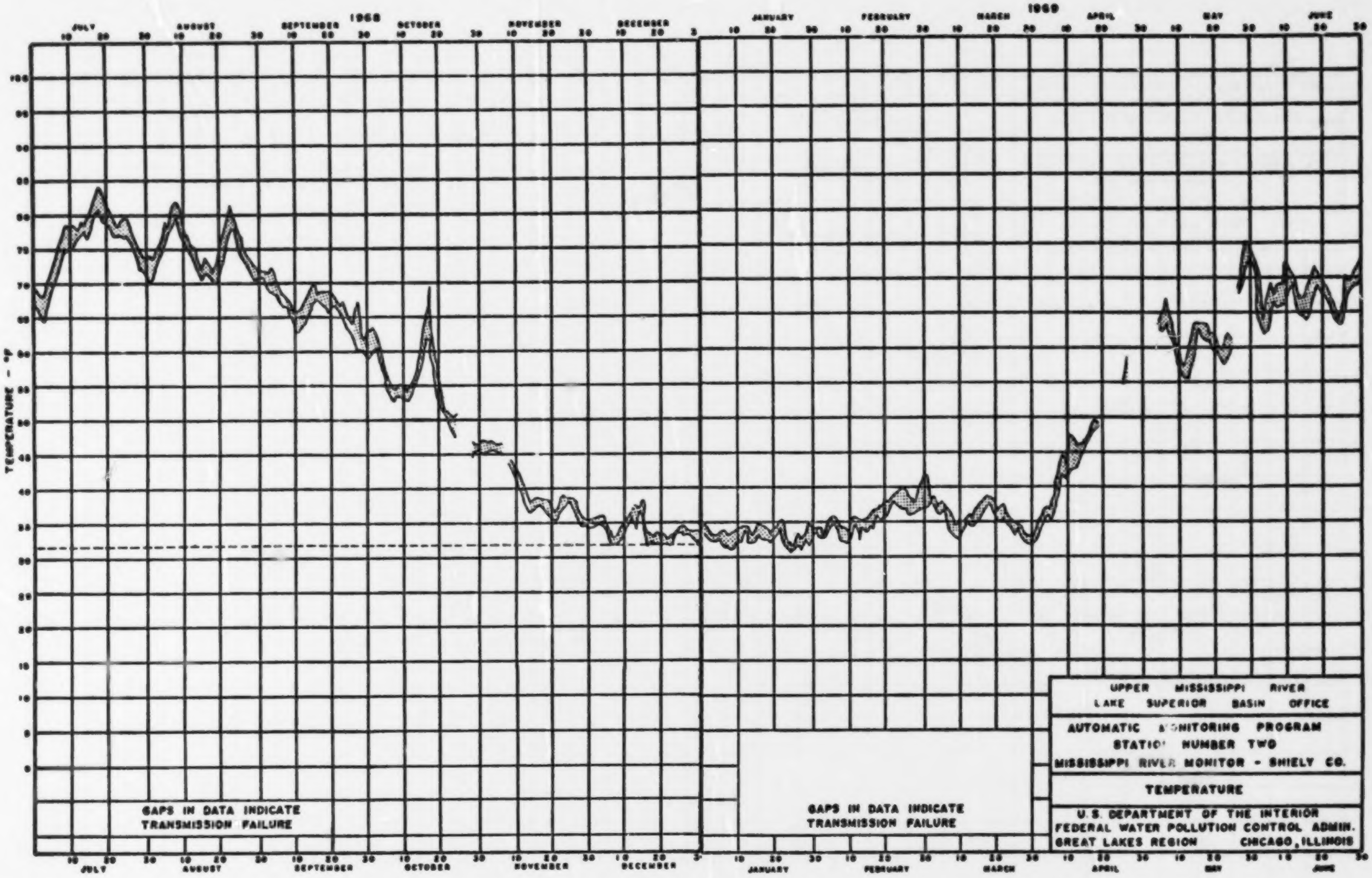


UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

AUTOMATIC MONITORING PROGRAM
STATION NUMBER TWO
MISSISSIPPI RIVER MONITOR - SHIELY CO.

TEMPERATURE

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS



GAPS IN DATA INDICATE
TRANSMISSION FAILURE

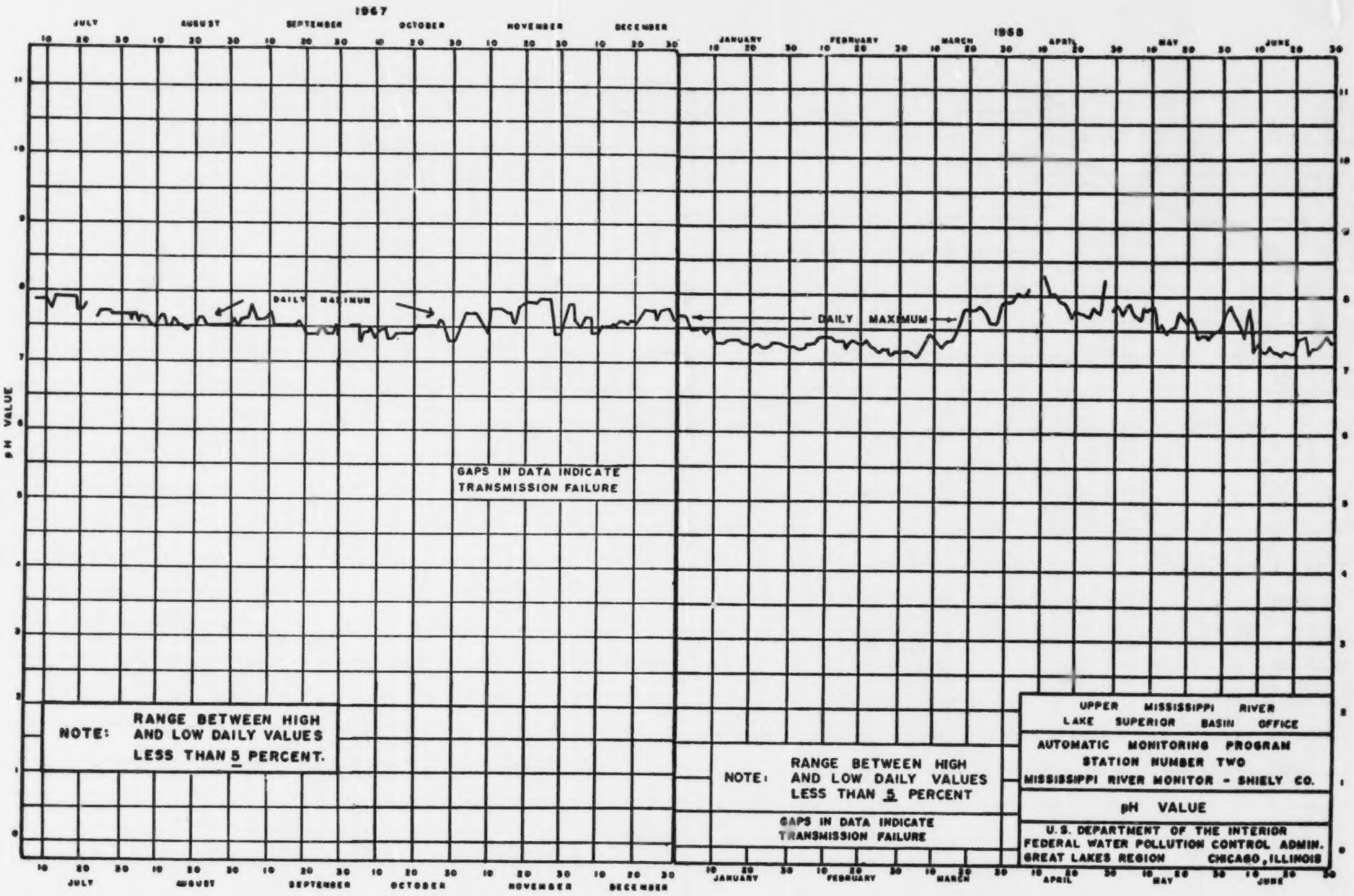
GAPS IN DATA INDICATE
TRANSMISSION FAILURE

UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

AUTOMATIC MONITORING PROGRAM
STATION NUMBER TWO
MISSISSIPPI RIVER MONITOR - SHIELY CO.

TEMPERATURE

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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DAILY MAXIMUM
GAPS IN DATA INDICATE TRANSMISSION FAILURE
NOTE: RANGE BETWEEN HIGH AND LOW DAILY VALUES LESS THAN 5 PERCENT.
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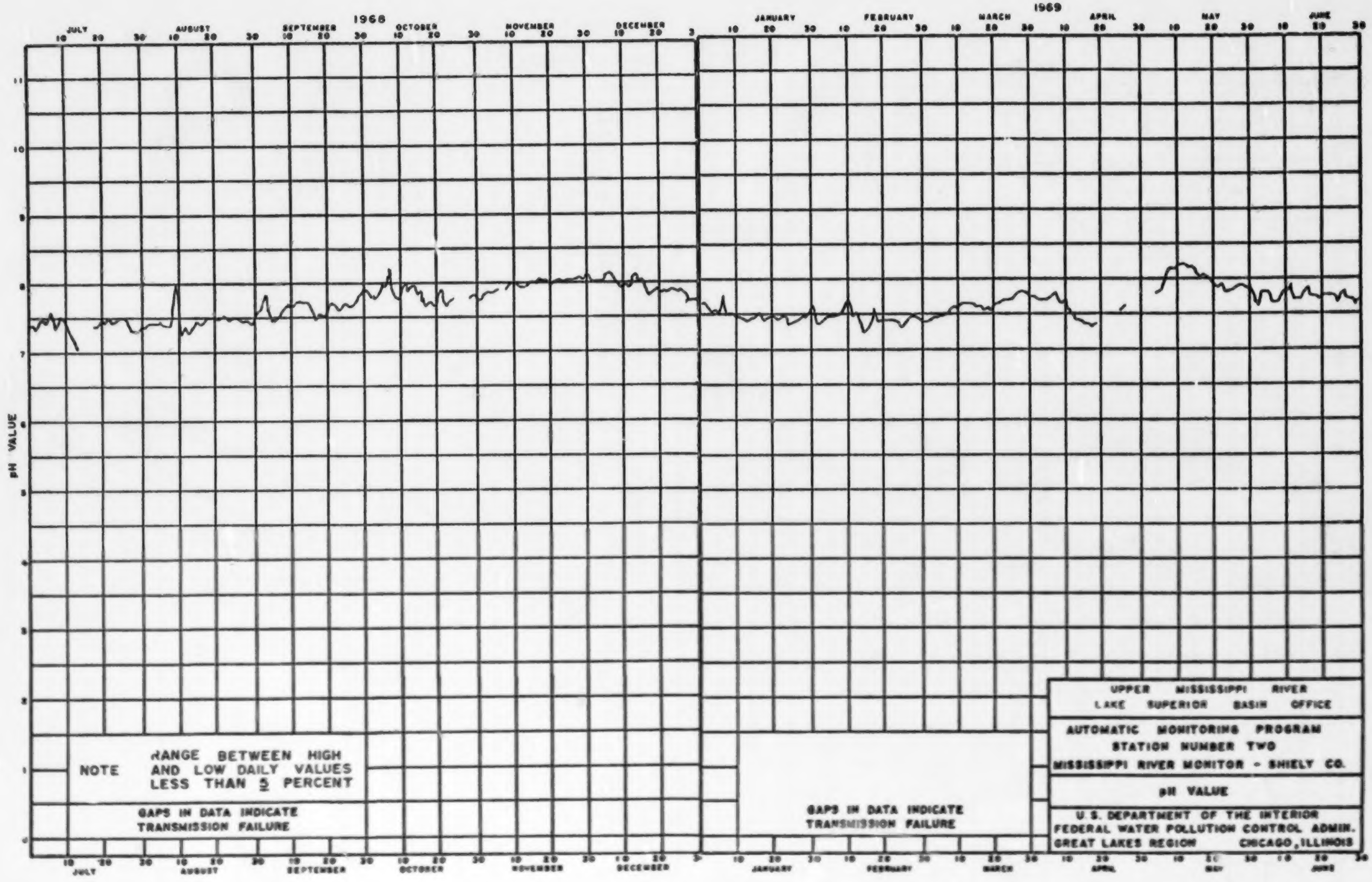
AUTOMATIC MONITORING PROGRAM
STATION NUMBER TWO
MISSISSIPPI RIVER MONITOR - SHIELY CO.
pH VALUE
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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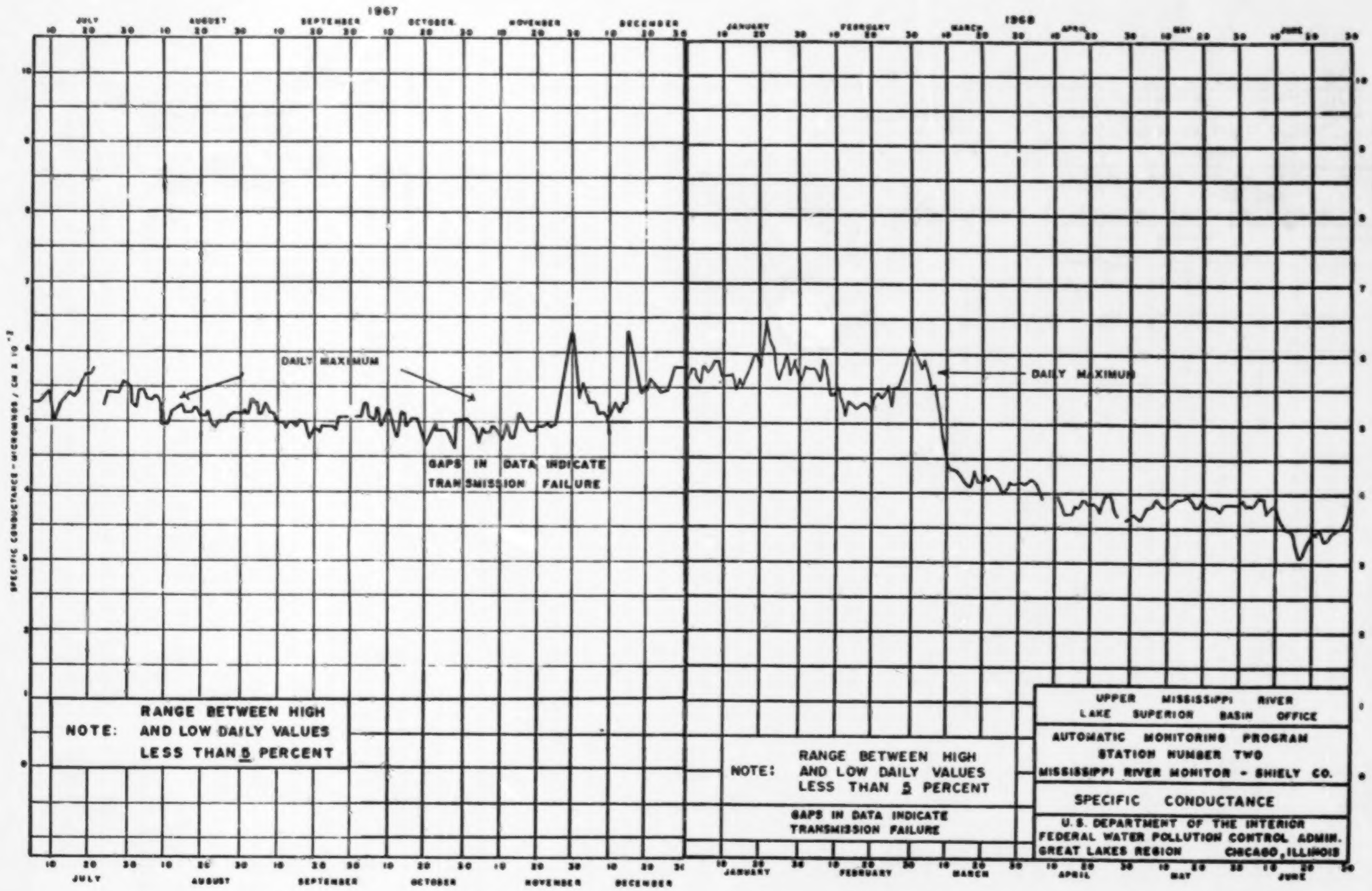
GAPS IN DATA INDICATE TRANSMISSION FAILURE
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER TWO
MISSISSIPPI RIVER MONITOR - SHIELY CO.
pH VALUE
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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DAILY MAXIMUM
GAPS IN DATA INDICATE TRANSMISSION FAILURE
DAILY MAXIMUM
NOTE: RANGE BETWEEN HIGH AND LOW DAILY VALUES LESS THAN 5 PERCENT
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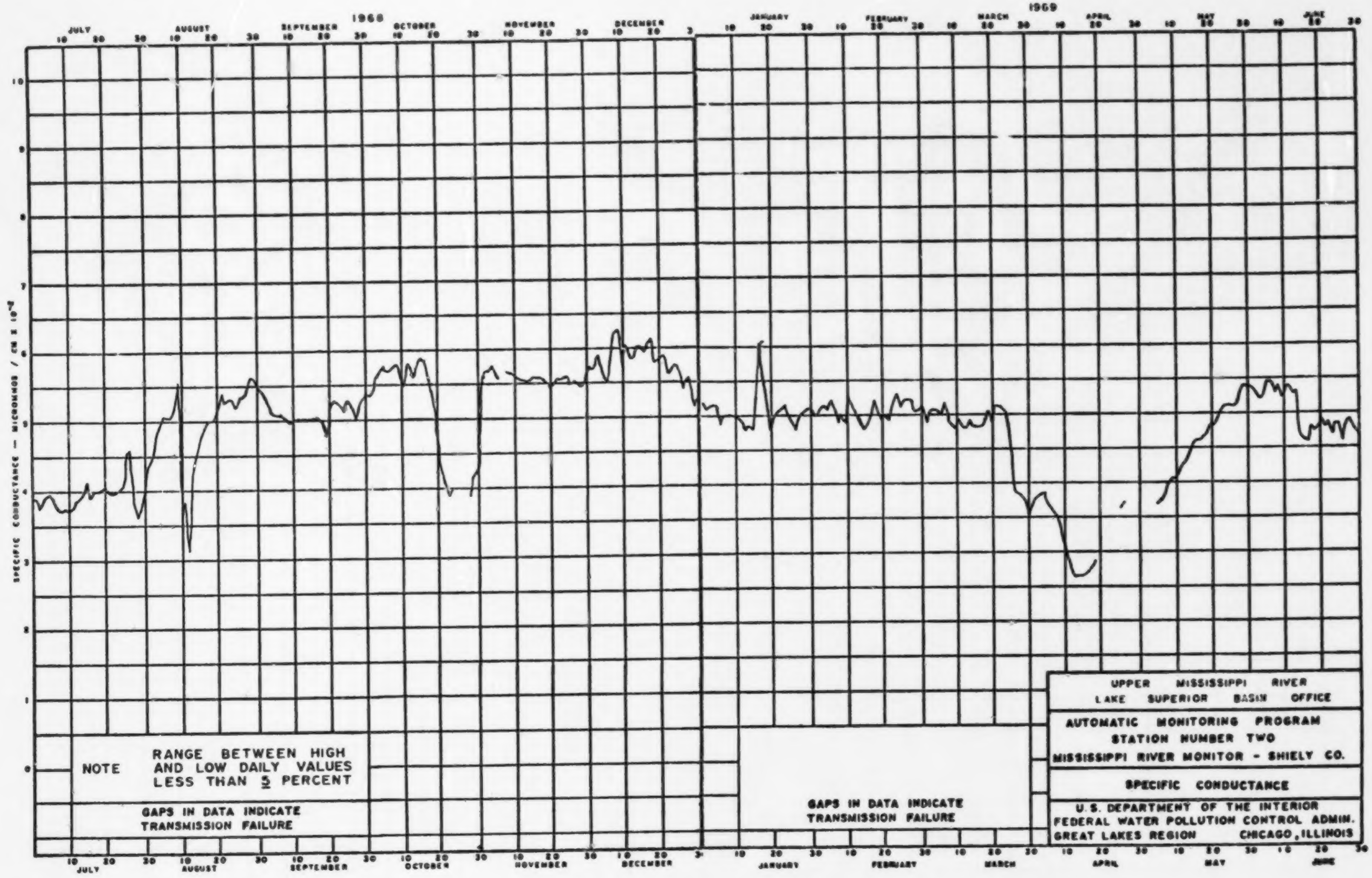
GAPS IN DATA INDICATE TRANSMISSION FAILURE
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER TWO
MISSISSIPPI RIVER MONITOR - SHIELY CO.
SPECIFIC CONDUCTANCE
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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SPECIFIC CONDUCTANCE — MICROMHOS / CM X 10^2
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NOTE
RANGE BETWEEN HIGH AND LOW DAILY VALUES LESS THAN 5 PERCENT
GAPS IN DATA INDICATE TRANSMISSION FAILURE
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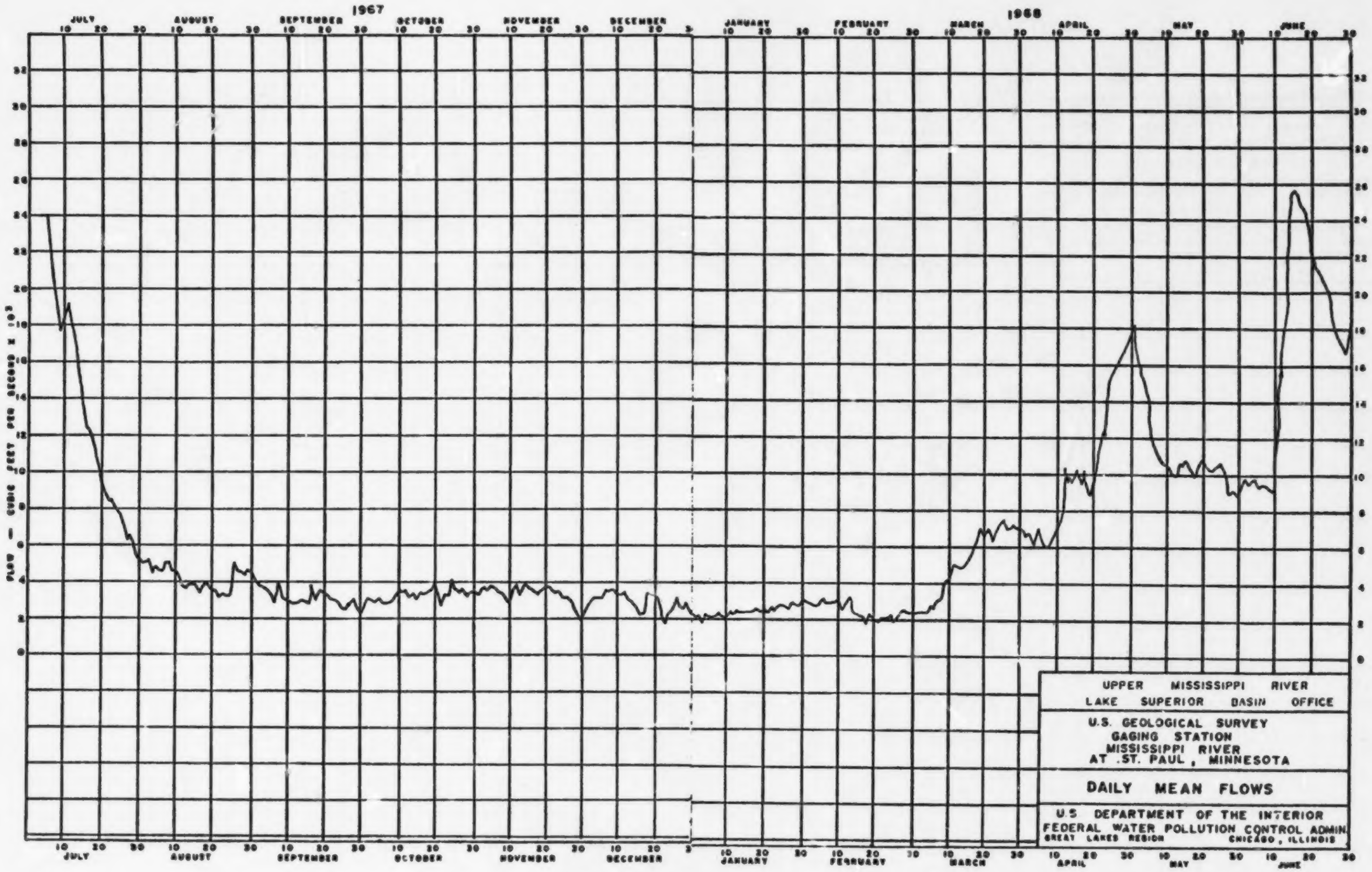
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER TWO
MISSISSIPPI RIVER MONITOR - SHIELY CO.
SPECIFIC CONDUCTANCE
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS


1967
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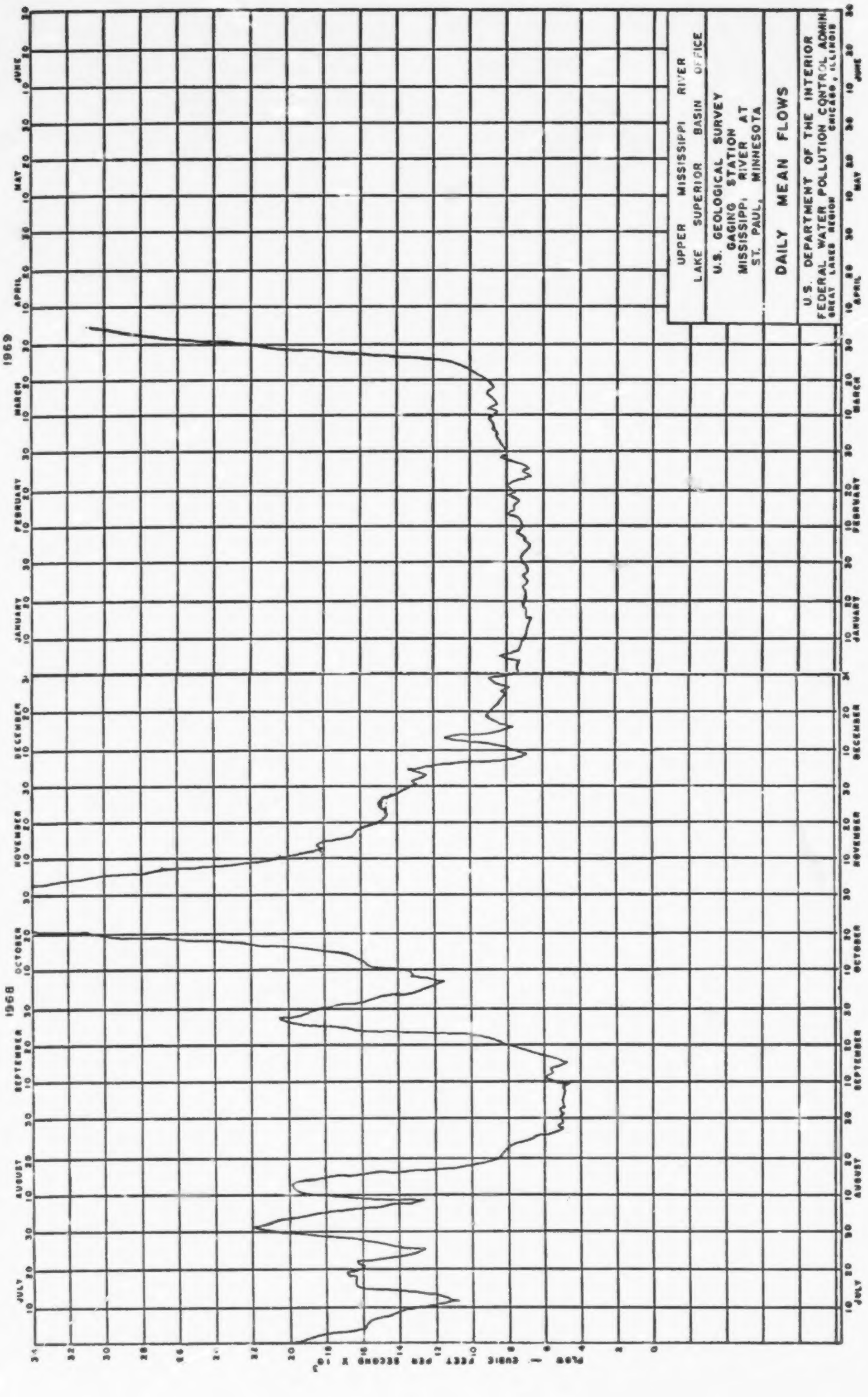
JUNE
10 20 30
FLOW — CUBIC FEET PER SECOND X 10³
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
U.S. GEOLOGICAL SURVEY
GAGING STATION
MISSISSIPPI RIVER
AT ST. PAUL, MINNESOTA
DAILY MEAN FLOWS
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION
CHICAGO, ILLINOIS


UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
U.S. GEOLOGICAL SURVEY
GAGING STATION
MISSISSIPPI RIVER AT
ST. PAUL, MINNESOTA
DAILY MEAN FLOWS
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS
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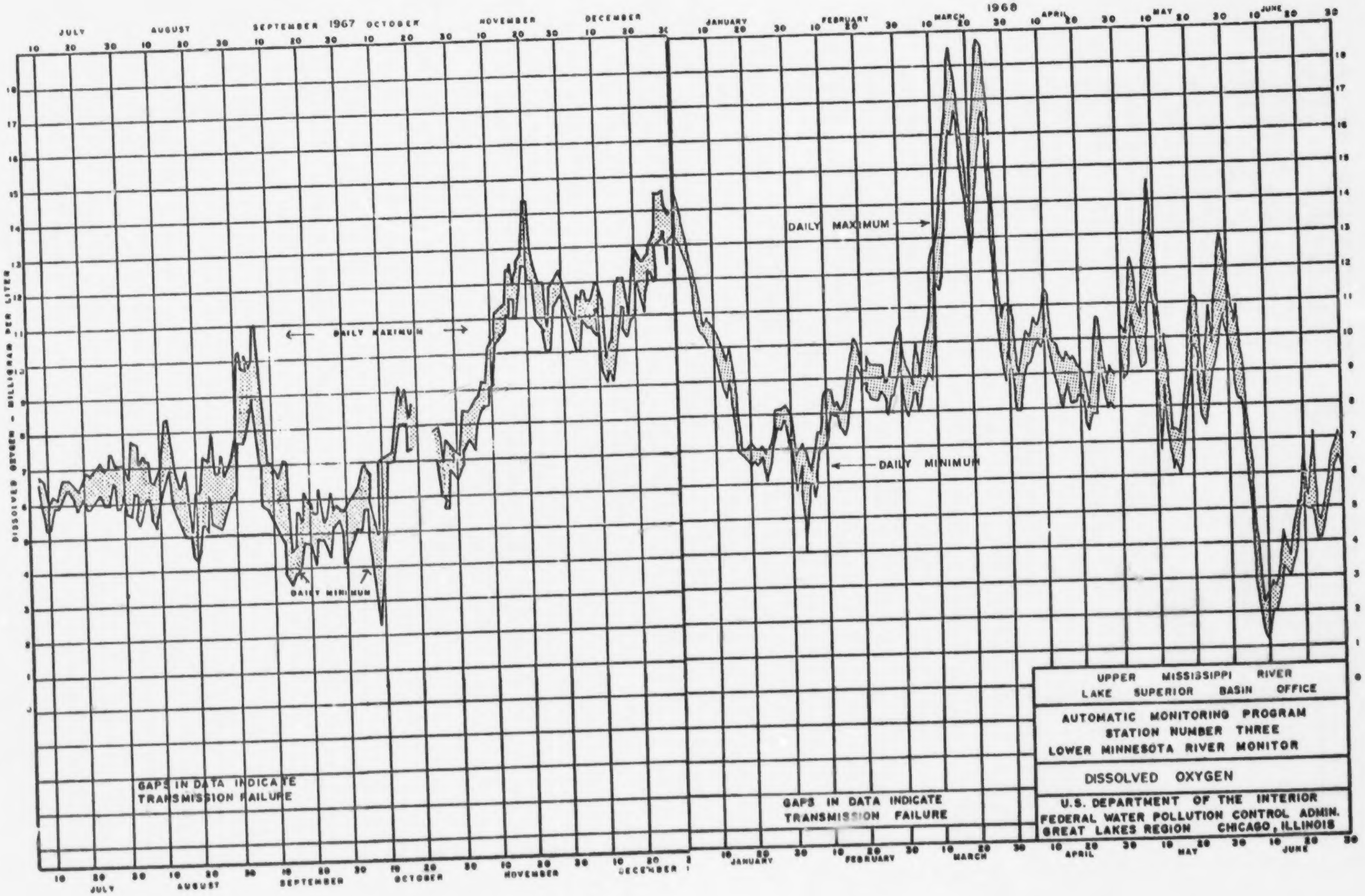
AUTOMATIC MONITORING STATION NO. 3

MINNESOTA RIVER - MILE 3.5


UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER THREE
LOWER MINNESOTA RIVER MONITOR
DISSOLVED OXYGEN
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS
1967
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DISSOLVED OXYGEN - MILLIGRAM PER LITER
DAILY MAXIMUM
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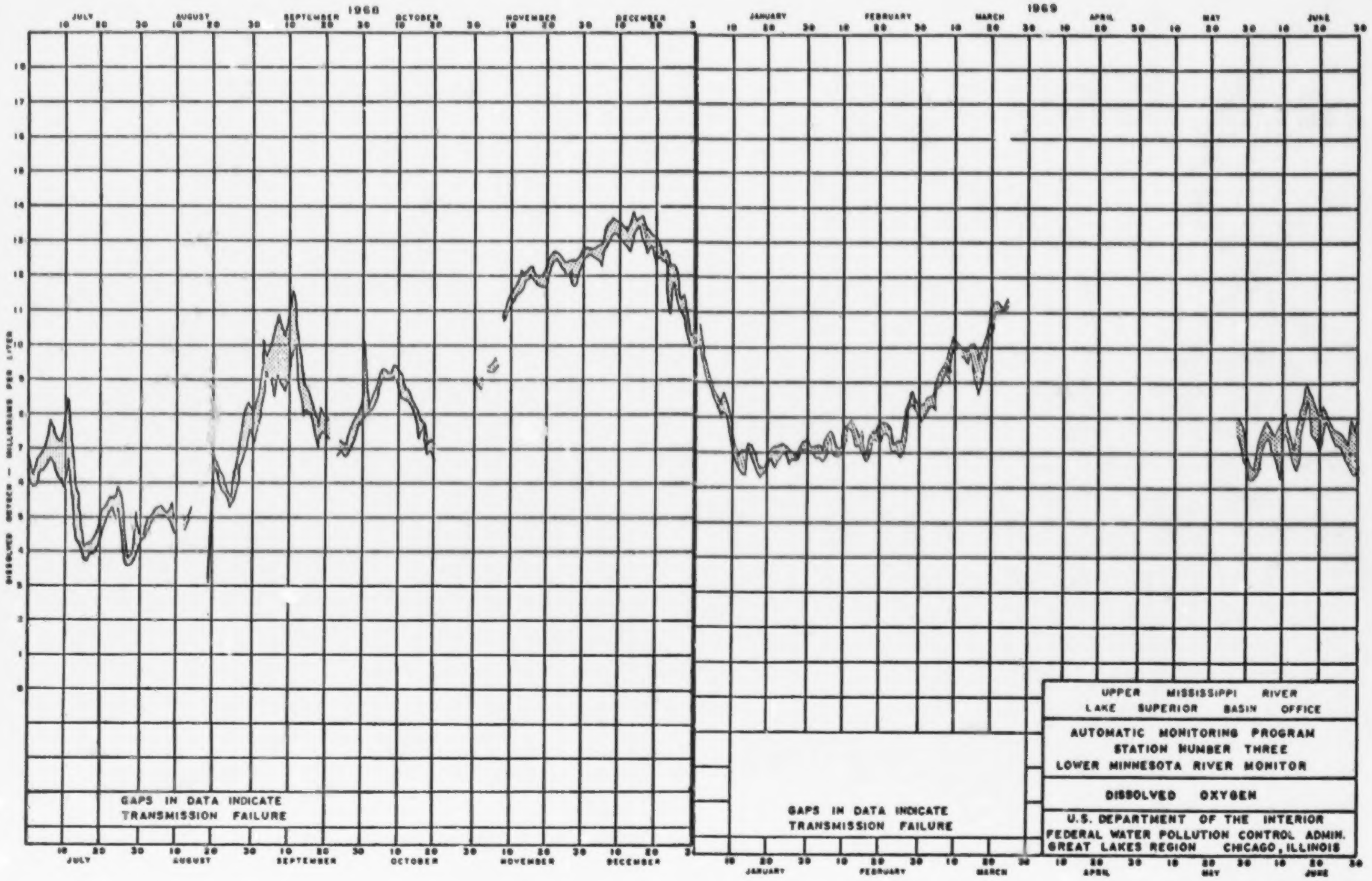
GAPS IN DATA INDICATE TRANSMISSION FAILURE
GAPS IN DATA INDICATE TRANSMISSION FAILURE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DISSOLVED OXYGEN - MILLIGRAMS PER LITER
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GAPS IN DATA INDICATE
TRANSMISSION FAILURE
GAPS IN DATA INDICATE
TRANSMISSION FAILURE
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER THREE
LOWER MINNESOTA RIVER MONITOR
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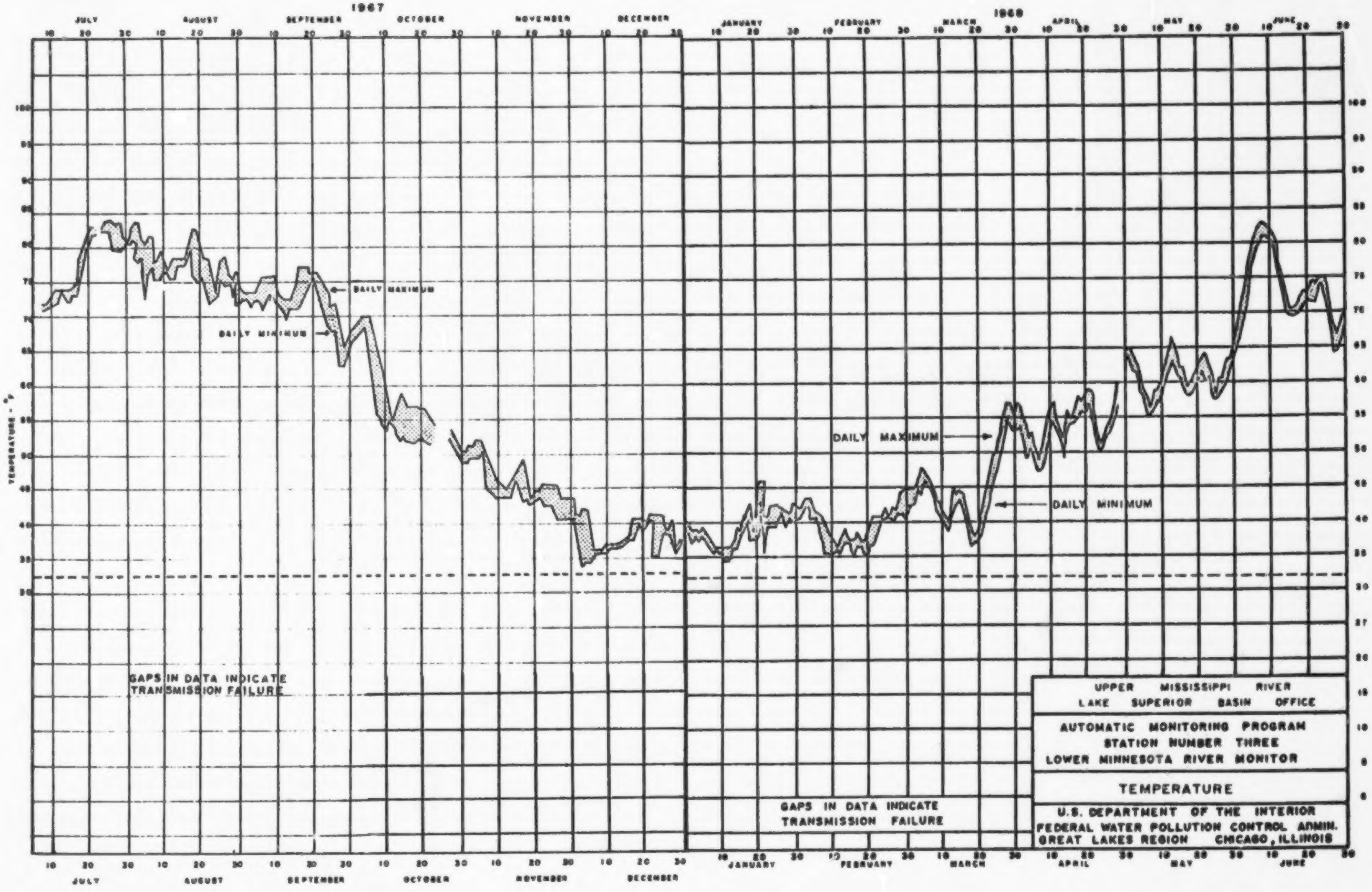
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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TEMPERATURE - °F
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DAILY MAXIMUM
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GAPS IN DATA INDICATE TRANSMISSION FAILURE
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER THREE
LOWER MINNESOTA RIVER MONITOR
TEMPERATURE
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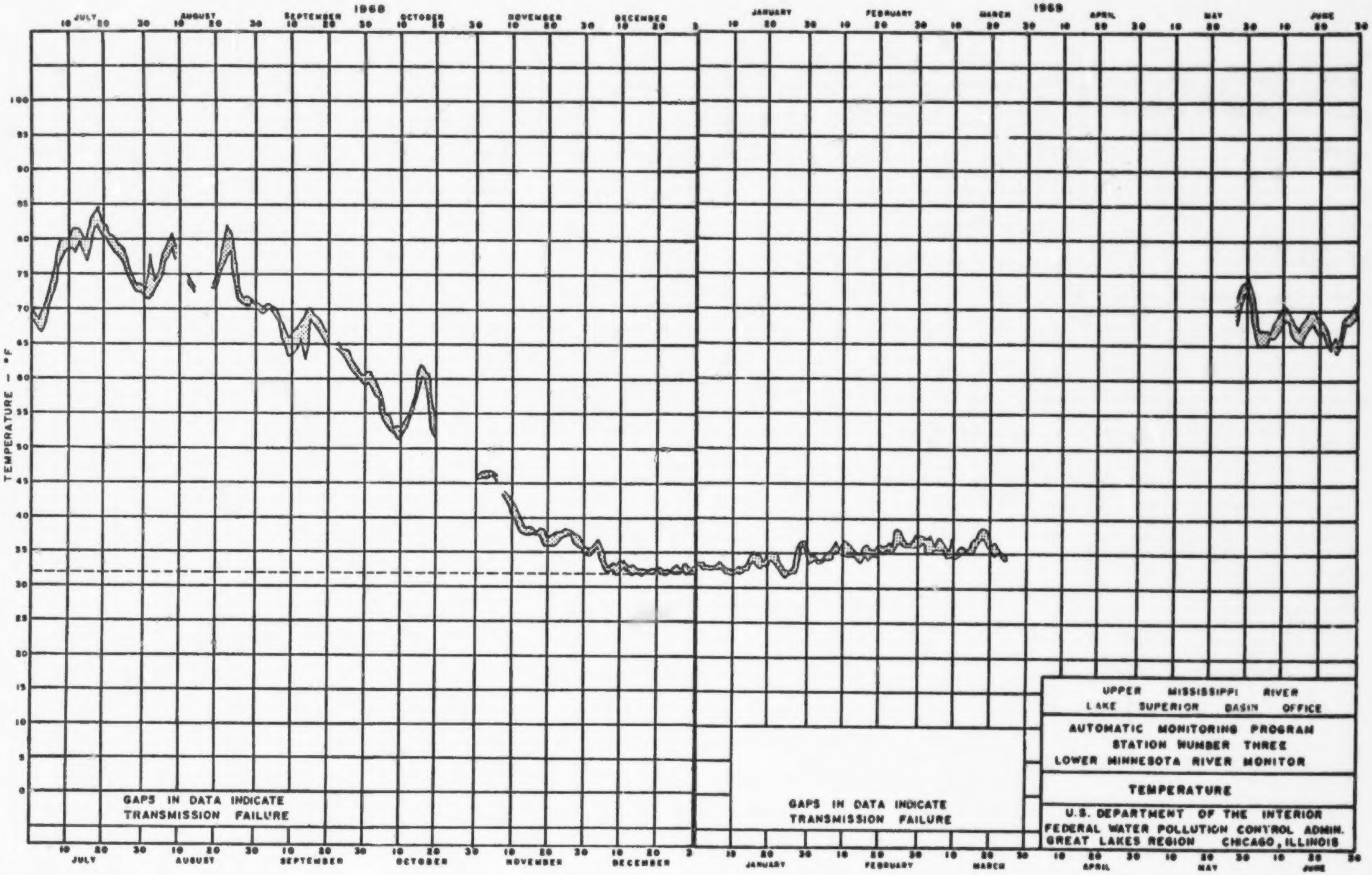
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS



UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

AUTOMATIC MONITORING PROGRAM
STATION NUMBER THREE
LOWER MINNESOTA RIVER MONITOR

TEMPERATURE

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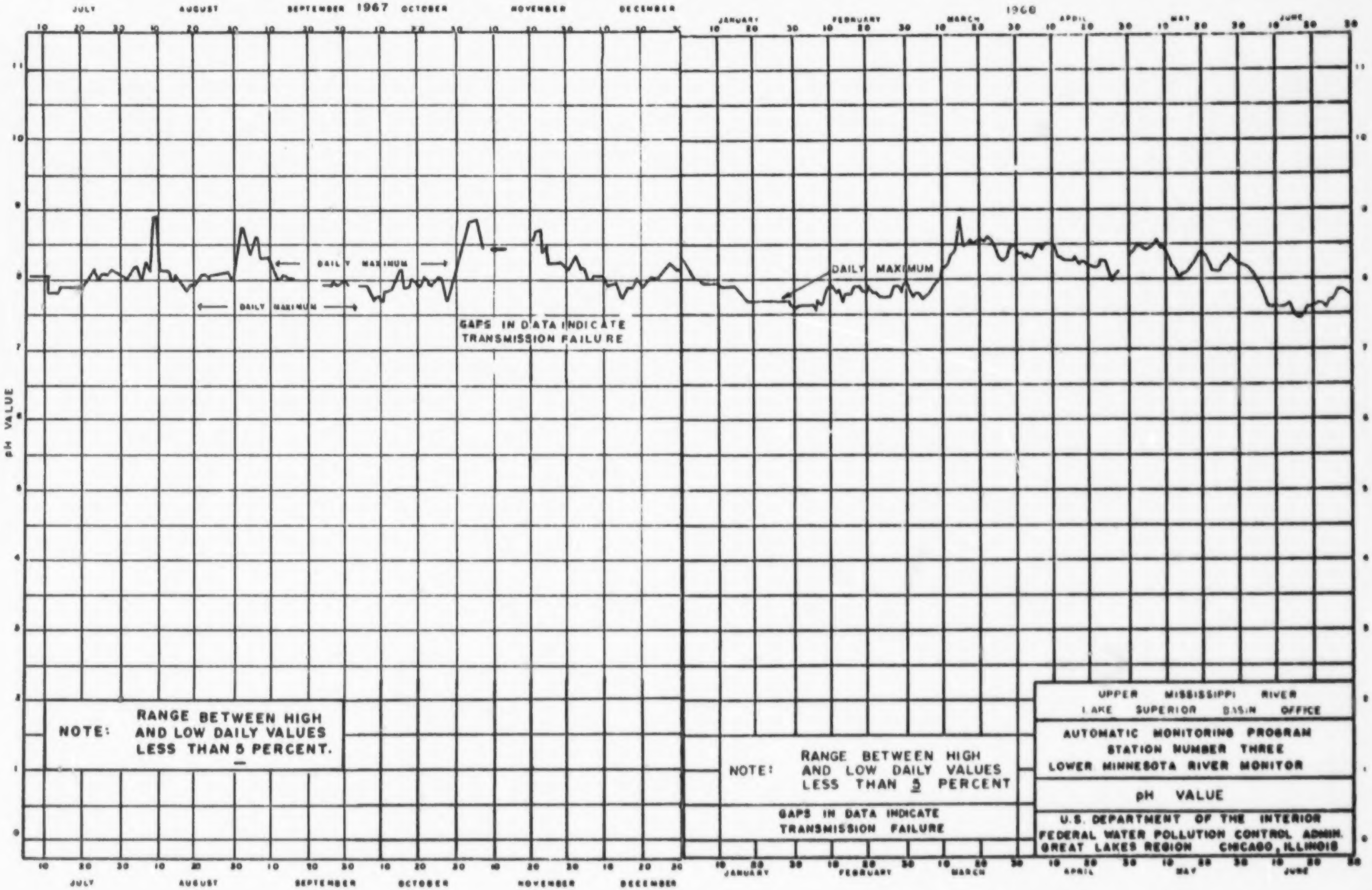
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS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pH VALUE
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DAILY MAXIMUM
DAILY MAXIMUM
GAPS IN DATA INDICATE TRANSMISSION FAILURE
DAILY MAXIMUM
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UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER THREE
LOWER MINNESOTA RIVER MONITOR
pH VALUE
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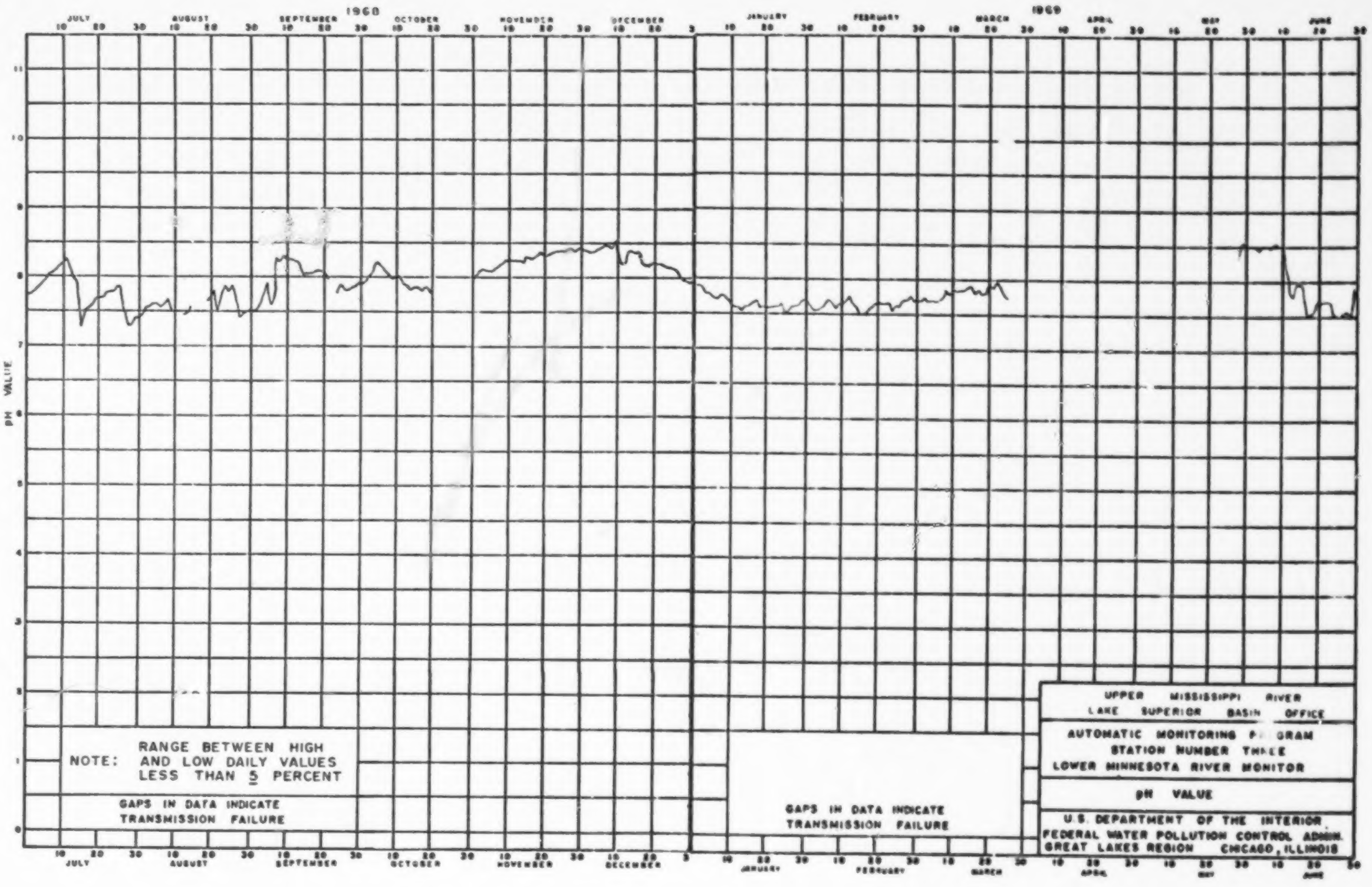
GREAT LAKES REGION CHICAGO, ILLINOIS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NOTE: RANGE BETWEEN HIGH AND LOW DAILY VALUES LESS THAN 5 PERCENT
GAPS IN DATA INDICATE TRANSMISSION FAILURE
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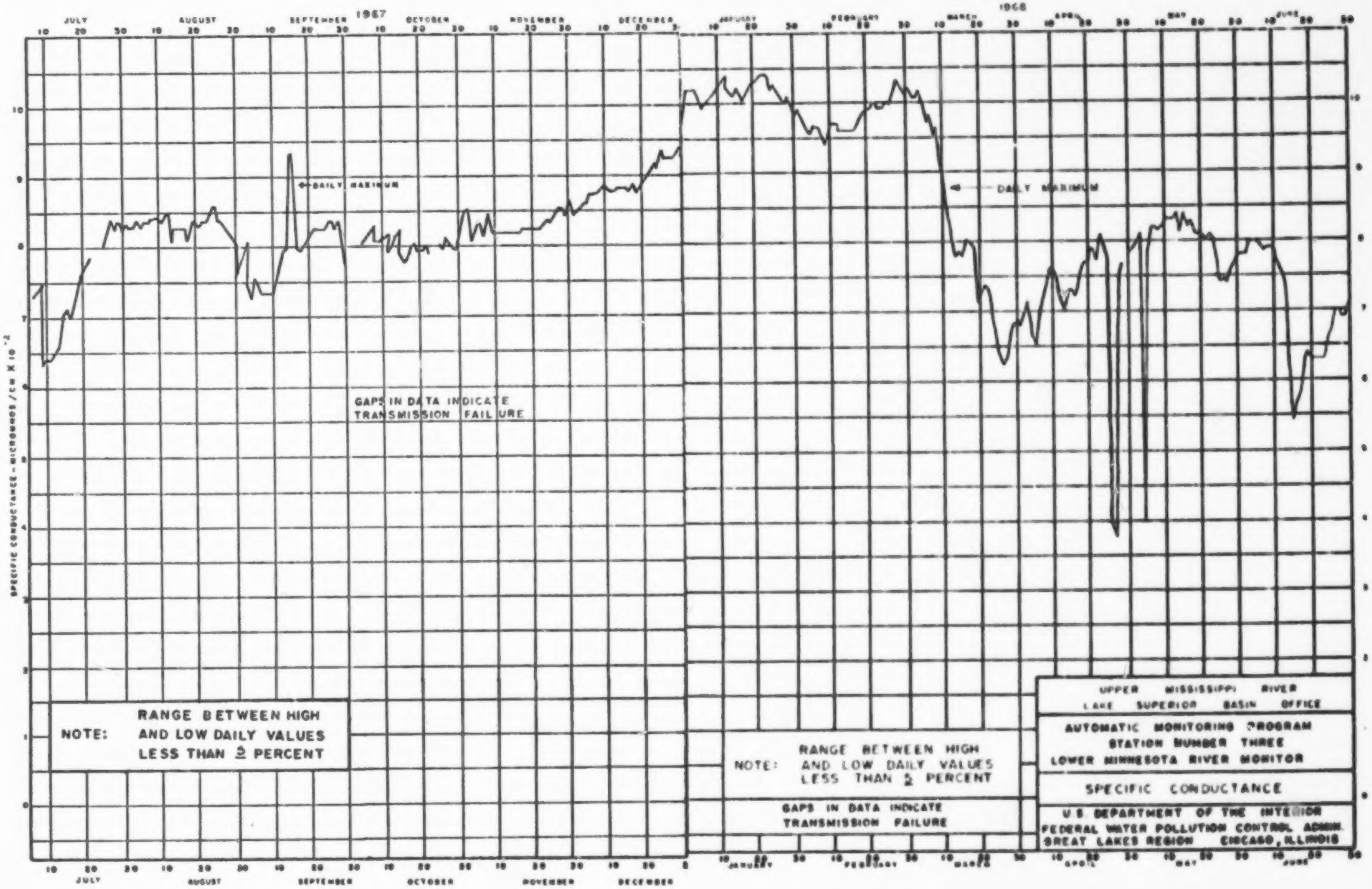
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
AUTOMATIC MONITORING PROGRAM
STATION NUMBER THREE
LOWER MINNESOTA RIVER MONITOR
pH VALUE
U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS

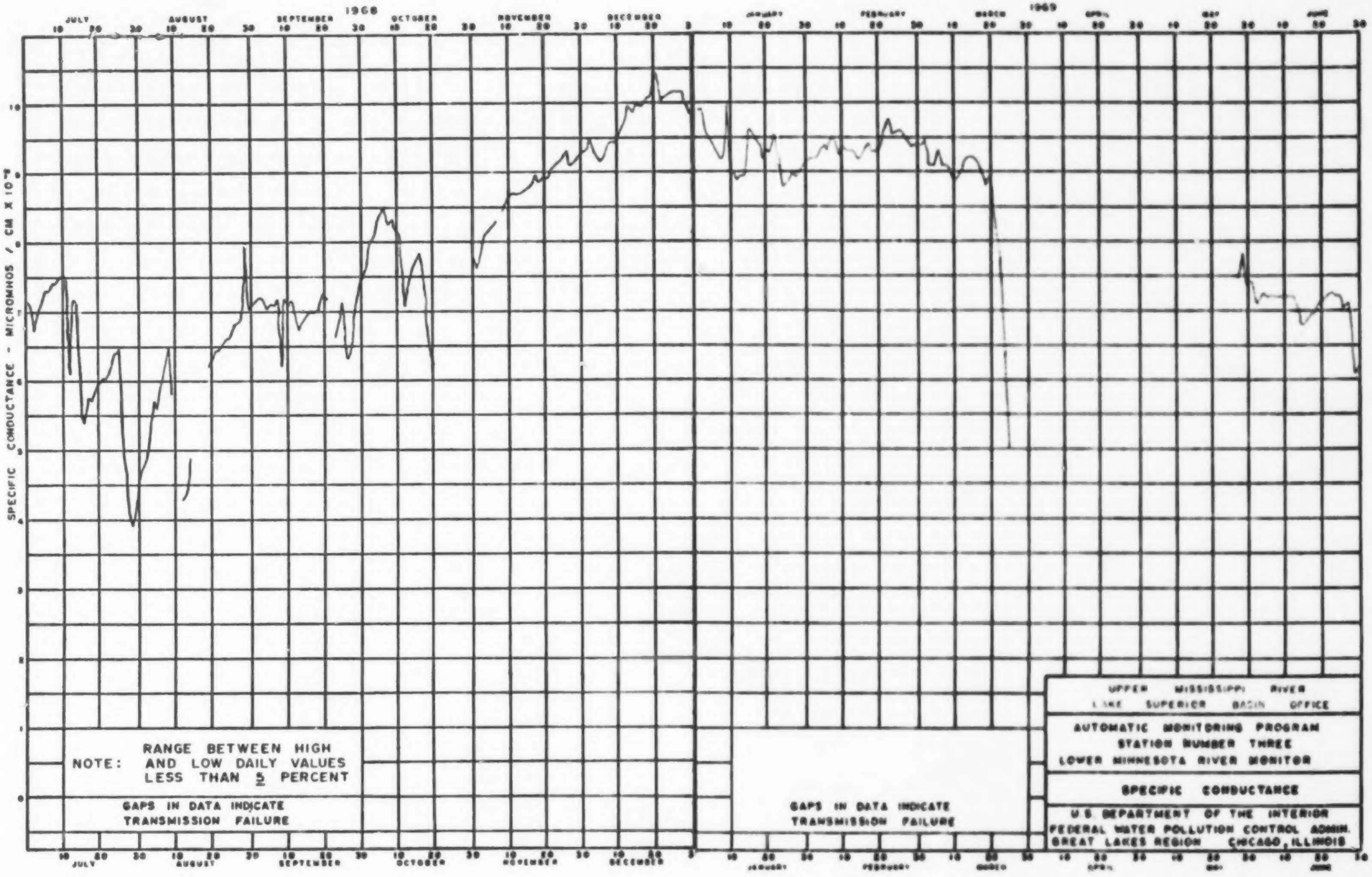


UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

AUTOMATIC MONITORING PROGRAM
STATION NUMBER THREE
LOWER MINNESOTA RIVER MONITOR

SPECIFIC CONDUCTANCE

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS



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GAPS IN DATA INDICATE TRANSMISSION FAILURE

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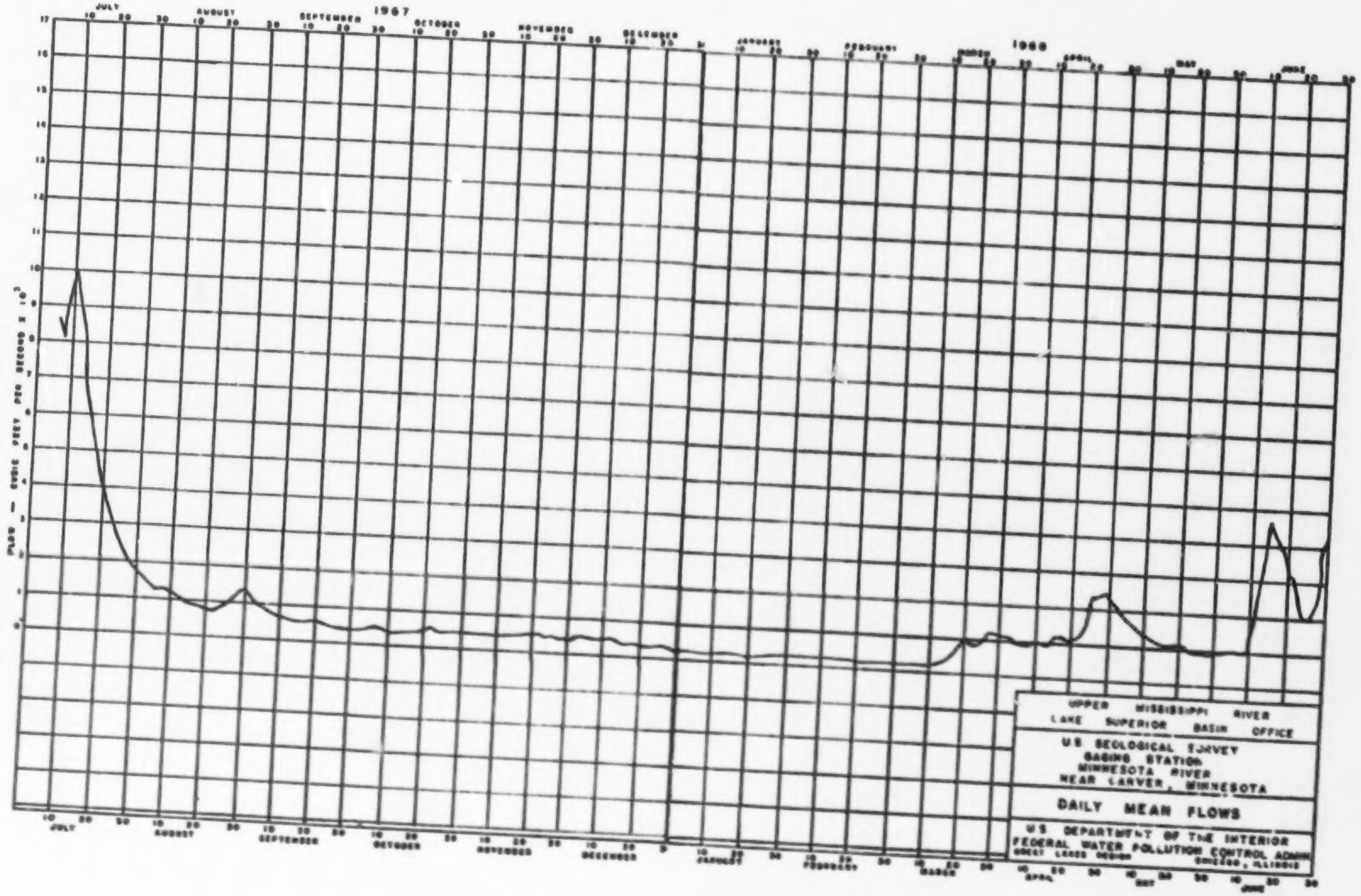
UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

AUTOMATIC MONITORING PROGRAM
STATION NUMBER THREE
LOWER MINNESOTA RIVER MONITOR

SPECIFIC CONDUCTANCE

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS


UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE
U S GEOLOGICAL SURVEY
GAGING STATION
MINNESOTA RIVER
NEAR CARVER, MINNESOTA
DAILY MEAN FLOWS
U S DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN
GREAT LAKES REGION
CHICAGO, ILLINOIS
FLOW — CUBIC FEET PER SECOND X 10³
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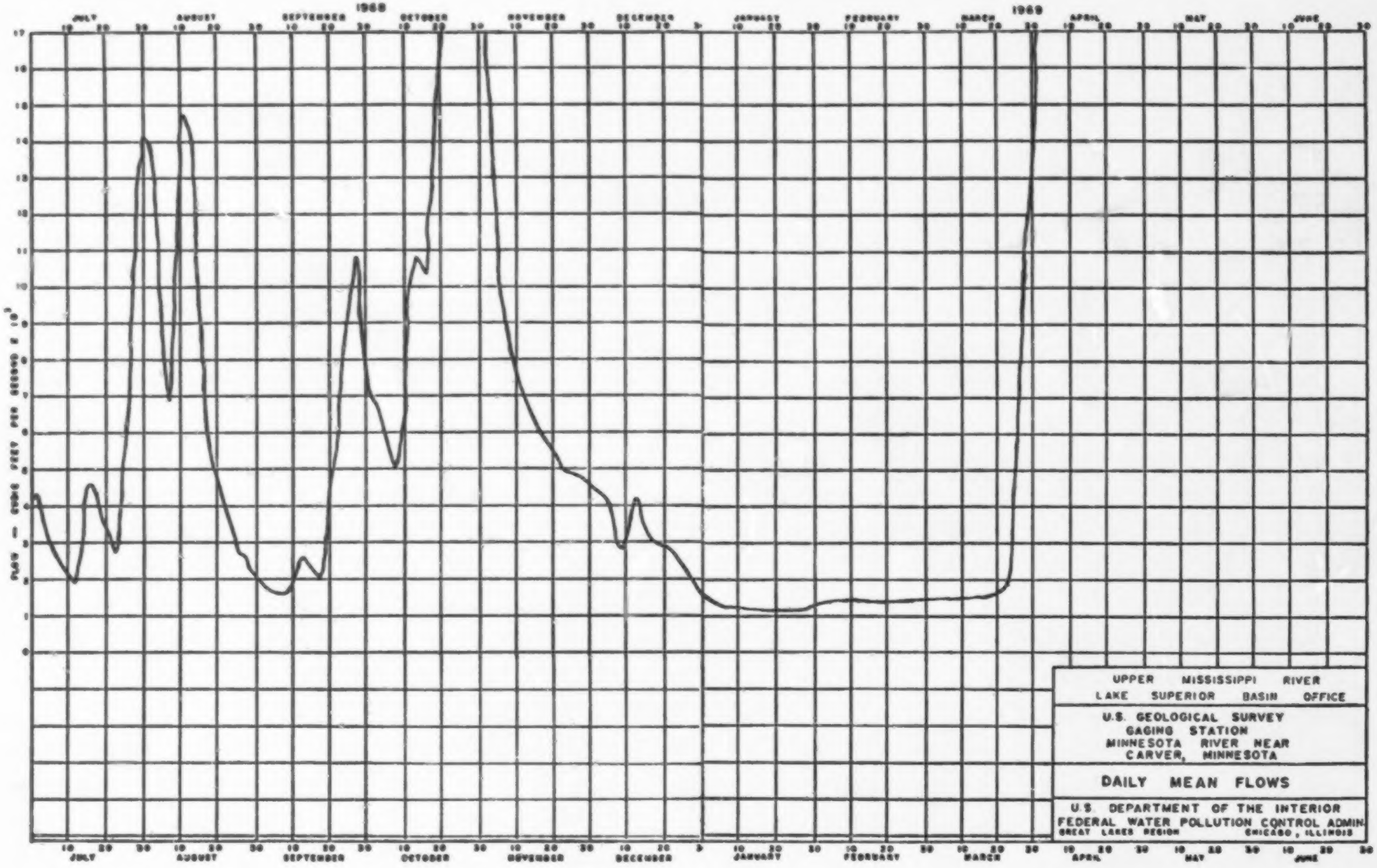

UPPER MISSISSIPPI RIVER
LAKE SUPERIOR BASIN OFFICE

U.S. GEOLOGICAL SURVEY
GAGING STATION
MINNESOTA RIVER NEAR
CARVER, MINNESOTA

DAILY MEAN FLOWS

U.S. DEPARTMENT OF THE INTERIOR
FEDERAL WATER POLLUTION CONTROL ADMIN.
GREAT LAKES REGION CHICAGO, ILLINOIS

MR. STEIN: Will you continue.

MR. BRYSON: The Mississippi River as it enters the Twin Cities (Monitor No. 1) is of good quality. The water quality parameters measured consistently exceeded minimum requirements. The quality of the Minnesota River, immediately above its confluence with the Mississippi River (Monitor No. 3), has shown some improvement. Minimum dissolved oxygen requirements were not met at all times in 1967 and 1968; however, improvement was noted in 1969, due to the installation of waste treatment facilities at several of the waste sources. The quality of the Mississippi River as it leaves the Twin Cities (Monitor No. 2) has also shown slight improvement from that of 1967. In the summer and early fall of 1967 the dissolved oxygen was consistently depleted. While the minimum dissolved oxygen requirement of 3 milligrams per liter (mg/l) was violated in 1968, the level did not drop below 1 mg/l. This is due in part to the Minneapolis-St. Paul Sanitary District's partial use of their secondary treatment facilities. The water quality to date in 1969 has been above minimum requirements, principally due to high river flows.

Marked improvement of the water quality below Minneapolis-St. Paul will not occur until the Minneapolis-St. Paul Sanitary District's presently constructed facilities are placed in operation. It is expected that the water quality monitor will reflect a degradation in water quality due to the planned bypassing of raw sewage from South St. Paul sewage treatment plant. Within the next month, the automatic monitor located at Northern States Power's Riverside Plant will be removed. The Minneapolis-St. Paul Sanitary District has installed an automatic monitor in that area. In order to avoid a duplication of effort, our monitor will be moved to Lock and Dam No. 3 near Red Wing, Minnesota. Data gathered from this site will depict the quality of water a distance downstream from the area of degradation and after mixing with the St. Croix River. The site location will also provide information on pre- and postoperation of the proposed powerplant upstream from Lock and Dam 3.

To implement the Nationwide Federal-State-local program to prevent, control and abate water pollution, the Department of the Interior will bring to bear all of its resources and powers to the support of measures which prevent pollution at the source. Wisconsin and Minnesota submitted water quality standards and plans for implementation for approval to the Secretary of the Interior as required under the Clean Water Act of 1965. Both States standards and implementation plans for the conference area have been approved.

With the increased effort towards pollution control being experienced on the Federal, State and local level, it is expected that the quantity of polluting materials discharged to the Mississippi River and its tributaries will be greatly reduced.

Thank you.

MR. STEIN: Thank you, Mr. Bryson.

Are there any comments or questions?

MR. BADALICH: Mr. Chairman, I have one.

At least on page 3, Mr. Bryson, you refer to the statement in the second paragraph:

"It is expected that the water quality monitor will reflect a degradation in water quality due to the planned bypassing of raw sewage from South St. Paul sewage treatment plant."

Does this refer to the short interval of time where they will be bypassing a primary treated effluent during the time that they are connecting in the new facilities? Is this what you make reference to?

MR. BRYSON: Yes, sir.

MR. TUVESON: I hope that South St. Paul will have some further comment on that later in the day.

MR. STEIN: Are there any other comments?

MR. POSTON: I was going to ask Mr. Bryson just how he accounts for this better water quality downstream when our Minneapolis-St. Paul sewage treatment plant is not in full operation? Some of the units are not functioning fully, they do not have chlorination, and when South St. Paul is bypassing, how do we get better water, better water with less treatment?

MR. BRYSON: In 1967 when the second session of the conference was held and the monitors were installed, the Sanitary District had primary treatment and the facilities for secondary were under construction. Last spring they placed into operation the use of their secondary facilities. I am sure Mr. Robins of the District will report on their activities later.

As I understand it, the facilities are not fully operable now due to problems with the incineration facilities. They are utilizing part of their secondary facilities now so that the level of treatment over that of 1967 has increased some percentage points. This increased treatment has resulted in a slight improvement of the water quality downstream. The facilities are not being operated yet to their designed capacity.

MR. TUVESON: Mr. Bryson, are you saying in your statement that if it were not for the high river flows there would perhaps be a degradation of water quality?

MR. BRYSON: Definitely.

MR. GADLER: I have one question.

MR. STEIN: Yes, go ahead.

MR. GADLER: Mr. Bryson, I am especially interested in variances, and from what you have just stated it appears to me that every time somebody comes before the Minnesota Pollution Control Agency and asks for a variance and if it is granted, will that also add to this degradation?

MR. BRYSON: It would depend upon the nature of the variance. If they are planning to discharge significant quantities of partially treated waste, yes, this would be a degradation of the quality.

That is such a general question, it is hard to be specific on it. It depends on the nature of the waste and the strength of the waste and the quantity that they want to discharge.

MR. GADLER: Mr. Chairman.

MR. STEIN: Yes.

MR. GADLER: I would like at this time to compliment the Federal water people for the stations they operate down along the river. I had occasion to visit one and it was really excellent.

MR. STEIN: Thank you.

I think again this is a key to clean water, these monitoring stations. We have a peculiar situation here that in running water pollution control facilities there isn't a built-in automatic check the way we have in certain other utilities. For example, if your water system goes out or your electric utility or your phone system goes out, all the customers know that immediately. You are not sure when this happens with the water pollution control facility. Maybe the fish know, but they don't talk.

So I think if we are going to make clean water we are going to have to be more and more dependent on these stations. I think we have a new way with these people. The information collected by the monitors is telemetered to a central recorder, and with space-age personnel such as Dale Bryson, maybe we can find out a little sooner than we found out in the past when our pollution control facilities were malfunctioning.

Are there any other comments?

MR. BADALICH: Mr. Chairman, as a matter of information to the conferees, the State of Minnesota was very fortunate in receiving their appropriation from the legislature this year. We did receive funds to purchase one automatic monitoring unit this fiscal year and also one next fiscal year, and we do plan on setting one up possibly between the Minneapolis-St. Paul Sanitary District plant and South St. Paul in the Mississippi River and possibly another one in the St. Croix. But it will be within the conference area.

So we have taken steps to supplement your facilities and we hope to tie this in with your central control plant. This will be worked out with Mr. Bryson at a later date.

MR. STEIN: Thank you.

Are there any other comments or questions?

If not, thank you very much, Mr. Bryson.

Mr. Poston.

MR. POSTON: Colonel McGinnis, District Engineer for the St. Paul District Corps of Engineers, will make a statement.

I will remind you that Colonel McGinnis replaces Colonel Hesse as District Engineer here and only very recently has come on the job. I hope you will bear with him a bit if some of the potential questions here he doesn't have all the answers for.

STATEMENT OF COLONEL CHARLES I. MC GINNIS
DEPUTY DISTRICT ENGINEER, U. S. ARMY
CORPS OF ENGINEERS, ST. PAUL DISTRICT
ST. PAUL, MINNESOTA

COL. MC GINNIS: Thank you, Mr. Poston.

Mr. Stein, Mr. Poston, ladies and gentlemen.

I appreciate the opportunity to meet with you and to describe briefly the operations and responsibilities of the Corps of Engineers regarding pollution problems on the Upper Mississippi River and its tributaries. The North Central Division of the Corps, which I represent this morning, includes all of the Mississippi River Basin from Saverton, Missouri, upstream to the Headwaters Reservoirs area. Principal tributaries of the Mississippi River system within this Division are the Minnesota, St. Croix, the Wisconsin, the Chippewa, the Iowa, the Des Moines, and the Rock Rivers.

The Corps of Engineers has for many years maintained a navigation channel on the Mississippi River, on the St. Croix River, and more recently on the

Minnesota River through channel dredging and the operation of several locks and dams on the main stem of the Mississippi. Six reservoirs in the Mississippi's headwaters area have been operated by the Corps since before the turn of the century. The Corps has constructed several flood-control projects and small boat harbors along the river; we are actively engaged in a floodplain management program throughout the Mississippi Basin, and in the development of recreational areas along the river. I will say more about our recreational program in a few moments.

The Mississippi River headwater reservoirs have been operated to supplement low flows in downstream reaches of the river and for the improvement of water quality. These flow supplements have been provided from storage within the normal operating limits of the reservoirs as determined for other public uses of the impounded water. Since water released from Lake Winnibigoshish takes up to twenty days to reach St. Paul, needs in the metropolitan area must be anticipated well in advance.

Studies now being made indicate the

availability of substantial water storage capacity in the Minnesota River Basin for quality control in the Twin Cities metropolitan area during critical periods when additional flow is required. On the basis of preliminary studies, storage of several hundred thousand acre-feet is tentatively being allocated for this purpose in contemplated reservoirs on the Blue Earth River at Mankato and the Minnesota River at New Ulm.

Although our effort on the Upper Mississippi and its tributaries has been directed primarily toward facilitating navigation, we of the Corps take cognizance of other public uses of the waterway. The pool created by each dam on the Mississippi provides a large water area for oxygen regeneration, for the propagation of fish and wildlife, and for fishing. In addition, re-aeration of the water as it cascades through dams is an important oxygen regenerating factor. This aerating action at our dams is the subject of a continuing joint study by the University of Minnesota and the Minneapolis-St. Paul Sanitary District, at our Lock and Dam No. 2. In connection with channel maintenance dredging operations, each area considered for spoil disposal is reviewed by the U. S. Fish and Wildlife Service and State conservation agencies to insure that such disposal will not have any deleterious effect on the wildlife habitat.

Our dredging operations on the Upper Mississippi are accomplished by the self-propelled hydraulic Dredge "WILLIAM A. THOMPSON" and the Derrickboat 767 with its attendant work boats. The Dredge THOMPSON, the Derrickboat and our work boats are now equipped with sanitary facilities as was reported to you previously. They are being monitored, as you know.

I will digress from my prepared text for just a moment to say that I was personally unaware of this problem on the Derrickboat 767. I can assure you of personal attention again just as quickly as I can get back with the members of my staff responsible for operation of the vessel. I cannot offer Mr. Gadler or the Chairman a definite timetable for corrective action on it, but we certainly will investigate it and make such corrections as we can just as promptly as circumstances will permit us to do this.

As you know, the General Regulatory Functions of the Corps as outlined in the River and Harbor Act of 3 March 1899, require Department of the Army permits for all types of structures and work in, over, or adjacent to navigable waterways which fall within the area of active Corps' jurisdiction. Originally these permits were issued only in the interest of navigation, but in the summer of 1967 the scope of Department of the Army permits was expanded. On 13 July 1967, the Secretaries of the Army and of the Interior adopted a Memorandum of Understanding which outlined policies and procedures for discharge of the two Departments' common responsibilities to improve water quality and to abate pollution in the navigable waters of this country. It was agreed that District Engineers of the Corps would coordinate with the Regional Coordinators of the Department of the Interior in matters of fish and wildlife, recreation and pollution associated with dredging and filling and excavation operations authorized by Department of the Army permits. Comments on all applications for permits are requested from the Fish and Wildlife Service, the Federal Water Pollution Control Administration, the Bureau of Outdoor Recreation, and other knowledgeable Federal and

State agencies prior to the issuance of permits. Thus, Department of the Army permits represent the end result of a close coordination and cooperation among all interested Federal and State agencies in the full and proper use of inland waters.

Pollution of the Mississippi River, particularly by gasoline and other petroleum products, is a continuing problem. In 1963 we contended with a major oil spill of some four million gallons of soybean and fuel oil on the Minnesota River; the recent instance of a ruptured barge on the Mississippi River at Alma, Wisconsin, is a second example. We in the North Central Division have the capability, in collaboration with the Federal Water Pollution Control Administration, the U.S. Coast Guard, and the various agencies within the Department of the Interior, of taking aggressive action in event of such oil spills because of the location of our locks and dams and attendant personnel along the Mississippi River, the radio network connecting the lock sites, and the availability of our marine equipment. In conjunction with our activities in cleaning up the recent oil spill on the Mississippi River at Alma, Wisconsin, the St. Paul District acquired a floating boom designed to confine oil to a restricted area where it can be removed from the water surface without creating excessive pollution. On 7 July 1969, a public notice was issued to all known interested parties indicating that this boom will be available for use in future instances of oil spillage or for collection of other floating material which could cause pollution.

The Corps of Engineers is carefully considering the pollution impact of recreational areas at our Mississippi headwaters reservoirs and at our locks and dams on the Mississippi River. Improved designs for toilet, shower, and laundry facilities at our recreational areas are being developed; we are considering secondary and tertiary treatment of wastes from such installations in planning new facilities. Sanitary dump facilities to accommodate trailer holding tanks have been installed at many existing Corps recreational camp areas; similar facilities at the locks and dams are being considered for recreational craft with holding tanks.

The Corps of Engineers is delighted with the opportunity to contribute its professional expertise to a full cooperative effort in the field of pollution prevention and correction. We feel a deep obligation to provide a measure of leadership through example in the design and management of our work. We look forward to continuation of the fine spirit of cooperation which, in our opinion, has permitted effective discharge of interagency responsibilities under terms of the Department of Army/Department of Interior Memorandum of Understanding.

Thank you, Mr. Chairman, for the opportunity to present our position.

MR. STEIN: Thank you, Colonel McGinnis.

Are there any comments or questions?

If not, let me try to get at these three points.

One, I would like to make a suggestion on that Derrickboat 767. I know there may be some difference of opinion on the macerator/chlorinator or the holding tank. Wisconsin, as you know, requires holding tanks. But my suggestion is on a Federal vessel that you seriously consider the holding tank device in this operation.

Now, I have one suggestion on those two and possibly the third one--that is the NIKE site. I wonder if within a month from now we could ask Mr. Gamet to work with you and develop a report and go to the conferees on what you are going to do about arrangements to get pump-out facilities if possible for the "Fern," so it won't be dumped into the river and what the proposal is to handle the wastes from the Derrickboat 767. I think we should at least know what your thinking is, possibly within a month.

Is that possible if Mr. Gamet prepares the report?

COL. MC GINNIS: We certainly will be prepared within a month to give you our progress and our intentions with regard to the derrickboat, sir.

Now, on the NIKE site, this is in the area of military construction, and unfortunately the St. Paul District does not have jurisdiction here. The Chicago District of the Corps of Engineers has this area for military construction.

MR. STEIN: How about operations?

COL. MC GINNIS: The operations would be

under the RADCOM.

MR. STEIN: That is another group?

COL. MC GINNIS: That is another group, sir.

MR. STEIN: All right.

COL. MC GINNIS: I think what we can do here, Mr. Stein, we certainly can notify and will notify Chicago District of the construction problem and see what arrangements have been made through them for correction of this condition.

MR. STEIN: Well, let's suppose we ask Mr. Gamet for a report on three things, and you may have to go to different commands for all these.

One, the proposal for correction of the Derrickboat 767 problem.

Another is the proposal to see if we can have the "Fern" have pump-out facilities or other measures to handle pollution control.

The other problem--and I don't know if this is appropriate or not, I was waiting to hear--is that if we are going to run a year late on NIKE site No. 40, we should have a judgment on whether any interim facilities or techniques such as chlorination of the effluent can be used to ameliorate the problems--both the pathogen problem and the odor problem.

Now, I think maybe I can leave it at that because we may want to hear from the conferees in the discussion period. But if you have any views on these three matters, I think these are the three of the Federal installations that need attention.

COL. MC GINNIS: The Derrickboat is the St. Paul District's property and we are the point of contact on this, sir. The other two agencies I think probably could be more effectively dealt with if approached directly, since we would just be another cog in the chain that I am afraid would simply serve to delay your action rather than enhance it.

MR. STEIN: I agree with you. Again, I have been around the Federal bureaucracy for a long time. That is why I suggested Mr. Gamet be the one responsible for the report and get in touch with you for the Derrickboat and get in touch with the appropriate Department of Defense units for the other two features here and have that report in a month.

Mr. Gamet.

MR. GAMET: May I make a point in regard to NIKE site 40. The post engineer at Fort Sheridan is the officer responsible for operation and maintenance of the NIKE sites. They have just recently instructed the Chicago District of the Corps of Engineers to prepare plans and specs for NIKE site 40.

MR. GADLER: Mr. Chairman.

MR. STEIN: Yes, sir.

MR. GADLER: I didn't mean to leave the implication, Colonel McGinnis, that I was taking off on the NIKE sites. The implication of my statement about Federal pollution is that the Federal Government in its various manifestations, spectrums and bureaucracy magnifications is equally guilty, and I hate to see them coming in the State, regardless of what they are called, whether they are called the Corps of Engineers or anything else, and pollute.

I certainly appreciate your statement and I know that we are going to get your help.

COL. MC GINNIS: You can count on that,

sir.

MR. GADLER: Thank you.

MR. STEIN: Are there any other comments or questions?

MR. BADALICH: Mr. Chairman.

MR. STEIN: Yes.

MR. BADALICH: Colonel McGinnis, you may not be able to answer this at this particular time, but do you feel that in the very near future the Corps of Engineers, probably with the help of the FWPCA, will be able to guarantee a low flow augmentation to the lower reaches of the Mississippi River from the headwaters reservoir in order to protect the aquatic life and wildlife and also for pollution abatement here in the metropolitan and lower reaches of the Upper Mississippi River?

COL. MC GINNIS: The word "guarantee" is very strong, Mr. Badalich. I would hate to offer you such hope as this. I think that our record, as I understand it, in providing this flow augmentation has been very good and we certainly would intend to continue policies which have permitted maximum drawdown of those reservoirs, with due consideration for other purposes up there, to assist in pollution abatement.

Frankly, our greatest hope in improving flow augmentation right now is, as mentioned in my statement, the authorization of eventual construction of additional reservoirs on the Minnesota River. We feel that if these reservoirs eventually come into the system that the amount of water available for pollution abatement would be so spectacularly increased as to represent a really massive step forward in the work that we are undertaking here today.

MR. BADALICH: Mr. Chairman, I have to compliment the Corps of Engineers. We had an instance last fall just before the winter set in of cooperation of the Corps of Engineers in providing the necessary flow augmentation that was required because of the low DO in the river, and I hope this relationship does continue in the future.

COL. MC GINNIS: Thank you, sir. We will make every effort to insure it does.

MR. GADLER: Mr. Chairman, I am going to ask an ignorant question here.

Why is it necessary to augment the river with additional flow because of low DO?

MR. STEIN: Well, I don't know if any of these people want to answer that, but let me try.

What happens is that if you have treatment in a plant, it must be assumed that generally the effluent is going into a river with a certain amount of flow in the river. I suppose you can increase treatment constantly and possibly not have flow augmentation. But if you do that, you will find--and you only need look at the rivers--that the point is reached where water gets so low that even if you provide the best possible treatment you are going to have a deleterious effect on aquatic life and the biota of the river. So what you do for a variety of reasons, one of which is water quality management, is have an augmented low flow in the river during key periods of time.

Now, let me just get back to this, because the Corps has been very sympathetic about this and has worked with us very closely. But I am not sure that the people in authorizing these structures have recognized completely the necessity for augmented low flows to maintain water quality in our rivers. Our country is running out of naturally flowing rivers. Rivers like the Mississippi and the Missouri, the South Platte, various other rivers, Ohio, are regulated streams. When we regulate a stream, presumably we regulate the maximum flow so we don't have floods. We make the maximum use of water. We also regulate the minimum flow in the river.

Now, let me go back to two specific cases, Mr. Gadler, to illustrate what I mean. In one case we were successful. In another case we were unsuccessful.

In the South Platte River, which flows east from Denver, we had a requirement of secondary treatment, plus chlorination, plus a tremendously high degree of treatment to reduce sugar beet wastes. When this is all completed during low flow periods, the South Platte River dries up into a series of pools. You see a dry area, then a little pool, a dry area and a little pool. We can maintain fishlife in the warm-water fishery in those pools, but obvioulsy you are going to wipe out all life with no water at all, as well as you would wipe it out if you had polluted water. So therefore, when the water comes back into that stream, the fishlife has to resurrect itself and you don't have a year-round growth population here. We try to get low flow augmentation to permit a flow in the South Platte River on a year-round basis sufficient to maintain a continuous flow up and down the stream. We have not been successful in getting that.

On the other hand, here is what happens in the Missouri River where we have a navigation season--the Colonel probably knows the dates specifically, but I don't have them in mind. In any event, the navigation season would stop in the wintertime when the river freezes over and the boats can't go above Kansas City. Now, in this case we have the Garrison Dam, the Oahe Dam and several other dams upstream.

Naturally, with the competing demand for water use, farm or agricultural interests want as much water kept up there as possible, because really for navigation you don't need that water at all during the winter months. However, we have cities such as Sioux City, Omaha, Council Bluffs, Atchison, Leavenworth, St. Joseph, and if they were putting their streams into a very low flow or dry stream bed, we would have pretty horrible conditions there during the winter months.

So we worked out an arrangement with the Corps whereby I think they maintained a minimum flow during navigational periods of 30,000 cubic feet per second and, until the treatment plants are built,10,000 cubic feet per second during winter months. Now as the degree of treatment increases there will be a decreasing need in low flow augmentation. This may be adjusted and we may be able to adjust this downward but if you are going to regulate a stream, unless you have a sufficient quantity of water there during the low flow period, you are not going to tide your biota over that period and you are going to have some catastrophic results.

In my opinion, I believe that low flow augmentation is going to be as critical a part of water quality management as treatment facilities and we are going to have to use both techniques as our streams become more and more regulated. I would suspect that except for those streams that have been designated as wild rivers by the Congress as a matter of public policy, we are going to find more and more streams will need regulation. For those people who are interested in a fully consistent environment, we are going to have to have augmented low flows.

Are there any other questions?

MR. POSTON: I might add to this, Mr. Chairman, in the Minneapolis-St. Paul Sanitary District the treatment at the present time is somewhere around 50 percent removal of BOD and some of the other pollutants that we get in the water, such as chlorides, would not be reduced any, and as you have large populations you get an increasing load on the stream regardless of the amount of treatment that you have. For example, if you had 10 percent removal from a million you would still--or 90 percent removal, you would have 10 percent remaining or still have 100,000 population equivalent going to the stream--

MR. GADLER: What you both have told me--

MR. POSTON: --and pollution is what we are trying to assist with. One hundred percent treatment would be very good and could be accomplished, but it hasn't been decided as practicable.

MR. GADLER: But what you both have told me is that if we don't do something about this that some day we won't have any water to augment with.

MR. STEIN: I don't believe I quite said that. The point is we have to manage both the quantity and quality of water in our streams. You must recognize one thing, and I think this is a key point that Mr. Poston pointed out. When we get an inorganic such as salts in the stream the quantity of those salts stays there as we go downstream until that water hits the sea. We see that problem in an acute form at the present time in the Colorado River. Now, if there is, say, a ton of salt in a particular area, you can do one of two things: 1) you can have very little water and really have a salty inorganic, or you name your inorganic other than salt, that is going to have very deleterious effects, or 2) you can have an augmented low flow and have much less salt content in that stretch of stream which is going to maintain the biota and preserve the ecology. It is my firm conviction as the population grows, low flow augmentation is just going to have to be used.

Again, Mr. Gadler, what you have to remember in a regulated stream, you can make that stream flow slowly or cut it down to a minimum that can be very, very, very low, except for local rainfall you probably can cut it down almost completely, and we certainly don't want to do that or we have wiped out the river.

Are there any other questions or comments?

If not, thank you very much, Colonel.

COL. MC GINNIS: Thank you, Mr. Chairman.

MR. STEIN: Mr. Poston.

MR. POSTON: Mr. Donald Marshall, Water Hygiene Representative of the Environmental Control Administration, Public Health Service, is here to make a statement.

STATEMENT OF DONALD W. MARSHALL
WATER HYGIENE REPRESENTATIVE, ENVIRONMENTAL CONTROL ADMINISTRATION, DHEW, REGION V
CHICAGO, ILLINOIS

MR. MARSHALL: My name is Donald W. Marshall. I am a Water Hygiene Representative for Region V, Chicago. I might add at the present time Minnesota is not within the Region V. However, most of the Upper Mississippi activities have been carried out of the Chicago office. If the President's reorganizational plan goes into effect in the next few months, I understand that Minnesota will come within the Region V area.

The Department of Health, Education, and Welfare, acting under the Public Health Service Act has primary Federal responsibility for protecting the health of the people. The Public Health Service has strong interest in the protection and enhancement of community water supplies, both as to adequacy and purity for water reaching the ultimate consumer. Water as it is delivered at the tap should be potable and should meet the recommended Public Health Service drinking water standards. The discharge of pollutants and wastewaters to rivers constitutes a threat to the health of people living in these watersheds and utilizing these waters for domestic supply, commercial and sports fishing, recreation, and other purposes. The health threat associated with water is of three types: chemical, biological and radiological.

The Public Health Service has long been concerned about the quality of water. The discharge of inadequately treated municipal and industrial wastes can cause impairment of water quality in surface waters, such as the Upper Mississippi River and its tributaries. The findings of previous studies indicate that inadequately treated municipal and industrial wastes are being discharged to these waters and that they could endanger the health and welfare of persons, not only in the States of Wisconsin and Minnesota but in some of the adjoining States. While conventional water supply treatment processes are capable of removing or destroying pathogenic organisms, the presence of pathogens in raw water supplies constitutes a hazard potential which is dependent upon human or mechanical failure. Also, polluted discharges constitute a direct hazard to those using the waters for contact recreational purposes.

In 1914 the Public Health Service established and with periodic revisions, the last in 1962, has maintained and published drinking water standards for water supplies used on interstate carriers and has responsibility for the certification of such water supplies. These standards have been adopted or are used as the guidelines for drinking water quality in nearly all of our States. The Public Health Service has also served as consultant and technical assistant to State and local health departments in their programs for safeguarding the quality of community water supplies.

There are several surface water supplies in Minnesota as well as a number of surface water supplies in other States which have their intakes below the waste discharges from municipalities and industries to the Upper Mississippi River. These public water systems serve over one million persons in the State of

Minnesota.

The Wisconsin and Minnesota surface water quality criteria were submitted to our agency for comments and on September 20, 1968, and January 1, 1969, the following letters were transmitted to the Federal Water Pollution Control Administration. These letters contained an introductory paragraph as follows:

"Under the provisions of the Interdepartmental Agreement of September 2, 1966, we offer for your consideration the following comments on the public health aspects of the Minnesota/Wisconsin (individual letters named the State whose criteria was being reviewed) Surface Water Quality Criteria."

The Public Health Service comments were limited to those criteria considered important to protection of the public health and are primarily concerned with the following subjects: Discussion of Criteria and Surface Water Quality Criteria, relating to Public Water Supply and Recreation. In the discussion of criteria for the State of Minnesota the comments were:

"Domestic Consumption: the criteria should provide standards for radioactivity in accordance with the recommendations contained in the Public Health Service 'Health Guidelines for Raw Water Quality' previously submitted to your office"--meaning the Federal Water Pollution Control Administration--"for review. All other Minnesota standards relating to 'Domestic Consumption' criteria are satisfactory.

"The Minnesota standard relating to 'Fisheries and Recreation,' based on total coliform, should protect the public health. On occasion, however, the standard, 1,000 coliforms per 100 milliliters, will limit recreational use of water when health hazards do not actually exist. We believe that standards based on fecal coliforms would give a more realistic guide for the evaluation of health hazards. Such standards are recommended in Section II of the Public Health Service 'Health Guidelines for Raw Water Quality' previously submitted to your office for review."

And for Wisconsin the comments relative to Public Water Supply were:

> "Since food processing waters require water quality equal to that of public water supplies, food processing waters should be included in this class. For the bacterial quality specified, 'appropriate treatment and adequate safeguards' should be defined as conventional treatment including coagulation, sedimentation, rapid sand filtration, and disinfection.
>
> "Limiting standards should be added for concentrations of boron, pesticides, and the uranyl ion as recommended by the Public Health Service 'Health Guidelines for Raw Water Quality.'"

Comments for Recreation:

> "The bacteriological standard pertaining to water contact recreation, based on total coliforms, should protect

the public health." Here again we quote the same thing. "On occasion, however, the standard of 1,000 coliforms per 100 milliliters will limit recreational use of water when health hazards do not exist. Again we recommend the use of fecal coliforms, which give a more realistic guide for the evaluation of health hazards.

"The opportunity to present these comments is appreciated."

Both letters were prepared for the signature of Chris A. Hansen, Assistant Surgeon General, Commissioner, Environmental Control Administration, Public Health Service.

You will note in these letters that we do not consider any degree of waste treatment less than secondary to be adequate where the downstream waters are to be used for public water supply or whole body contact recreation. In our opinion, fecal coliform criteria is appropriate and that these criteria should not be modified even on the basis of findings from a sanitary survey. It is our belief that the criteria to be used in Minnesota and Wisconsin should be no less stringent than the limits placed in our previously mentioned publication, "Health Guidelines for Raw Water Quality," copy on file with the Federal Water Pollution Control Administration. These guidelines provide standards for water to be used for domestic and food processing uses, recreation, shellfish, agriculture, as well as for control measures when considering vectors or the disposal of solid wastes.

I am pleased to represent the Department of Health, Education, and Welfare at this meeting. We in the Public Health Service are ready to do whatever we can to cooperate and assist in the job of safeguarding and improving the quality of these waters. We would urge the continuance of a vigorous water pollution abatement program being carried out by the Federal, State and local officials to assure a maximum use for all.

Thank you, Mr. Chairman.

MR. STEIN: Thank you, Mr. Marshall.

Are there any comments or questions?

MR. GADLER: I have one question.

MR. STEIN: Yes.

MR. GADLER: I want to know why you didn't include thermal wastes in the health threat to water?

MR. MARSHALL: Sir, we don't consider there to be any significant change in thermal that would be a health hazard to mankind. We are primarily interested in the health of mankind.

MR. STEIN: Are there any other comments or questions?

Mr. Poston.

MR. POSTON: I have a question here. On page 5 you say that, "In our opinion, fecal coliform criteria is appropriate and that these criteria should not be modified even on the basis of findings from a sanitary survey."

Do you mean that if you find that the fecal coliform is absent or very low and that you come along and find from a sanitary survey that there is waste being discharged,you should make your interpretation on the basis of the fecal coliform?

MR. MARSHALL: What we mean is that we

should not extend the minimums or raise the 200. That is the meaning of that, Wally. In other words, if a sanitary survey indicated that it was a real good environment or no problem, that we shouldn't raise our limits to let it go wholesale on the use of the water, but to maintain these limits.

MR. GADLER: I have one more question.

MR. STEIN: Go ahead, Mr. Gadler.

MR. GADLER: Mr. Marshall, you said that these were last revised in 1962?

MR. MARSHALL: The Public Health Service Drinking Water Standards, yes, sir.

MR. GADLER: Due to the fast-changing technology of this century, does the Health Service plan to change those again shortly?

MR. MARSHALL: Yes, in one sense, but not shortly. It takes time. We have continuing committees working on the various elements and concentrations, sir. It is hopeful that with manpower and budget limitations we will be able to come out with new drinking water standards. The date has not been given to us so I could not tell you that, but there is a continuing committee working on the various things on this.

MR. GADLER: Well, the reason for asking the question is that it is contemplated in the United States that we are going to have one hundred or so nuclear plants and they are going to be dumping a lot of radioactive material into our air and into the water. Does the Health Service take cognizance of that and are they going to get some new things out?

MR. MARSHALL: With other agencies we are serving on committees.

MR. STEIN: Don't you have that done? Right now there are limits on drinking water.

MR. MARSHALL: There are certain limits, yes.

MR. STEIN: Yes, for nuclear, radioactive material.

MR. MARSHALL: The limits that we have set in the drinking water standards are necessarily not those that would be from the nuclear reactor discharge. There are representatives of our agency working on a committee to revise and update these limits.

MR. STEIN: This deals with drinking water standards and I don't think--

MR. MARSHALL: Right.

MR. STEIN: --we should underrate this because we have been in this problem before. At least in drinking water or in ingestion when we had this problem when they used to be exploding the "dirty bombs," in quotes, it made very little difference to someone ingesting this material whether it was radium or Strontium 90 or it came from the fallout from a bomb or from the discharge from a uranium mill; once it got in the body it was all the same. And I think the Public Health Service has limits of radioactive material on the raw water use for drinking water.

MR. MARSHALL: Yes, that is right.

MR. STEIN: Right.

MR. GADLER: Do they have them for the public waters, did you say?

MR. STEIN: Yes.

Why don't you answer that, Don?

MR. MARSHALL: Yes.

MR. STEIN: Yes.

MR. MARSHALL: The drinking water

standards for finished drinking water are basically the same ones that we are recommending for raw water quality.

MR. GADLER: Are these the same standards as set by the ICBR or the AEC?

MR. MARSHALL: I believe they are. We are on the committee that worked with the limits recommended by the Federal Radiation Council, and based on that we are in support of those recommendations at this time. As I say, though, we have people on the committee that are working with other agencies for the upgrading and revising of these.

MR. STEIN: Any more questions?

MR. TUVESON: Mr. Chairman.

MR. STEIN: Yes.

MR. TUVESON: Mr. Marshall, I would like to refer back to the bottom of page 1 and top of page 2, and I will read your statement:

"The findings of previous studies indicate that untreated and/or inadequately treated municipal and industrial wastes are being discharged to these waters and that they could endanger the health and welfare of persons, not only in the States of

Wisconsin and Minnesota but in some of the adjoining States."

I find the statement to be alarming but not very illuminating or very helpful. I think it sounds a little like a politician's handout. I think that you should at least identify for us the previous studies to which you refer. I think you should identify the municipal and industrial discharger about which you are speaking. I think you should tell us whether they do endanger the health. I think you could ascertain this. And I think we should know whether these situations about which you are speaking are being corrected. That is what we are here for.

MR. MARSHALL: The studies we refer to, I am sure you are aware of, are by another agency, primarily the Federal Water Pollution Control Administration. We are given copies of their reports and material that is collected. Any time that we have inadequately treated waste being discharged into surface waters which are used downstream by public water supplies and other domestic uses,it is agreed by public health officials that it is a potential health hazard.

As I further stated, conventional water treatment processes are quite capable, we have to always be reminded or mindful that water treatment plants are subject to mechanical failure, human failure, and this potential threat is always existing as long as we have those potential hazards occurring.

MR. GADLER: I have one other question.

MR. STEIN: Mr. Gadler.

MR. GADLER: On the bottom of page 2 you quote, "There are several water surface supplies in Minnesota as well as a considerable number of water supplies in other States which have intakes below the waste discharges."

Now, in Minnesota which ones are you referring to, any of them?

MR. MARSHALL: This is all the ones that have intakes into the Minnesota River, the Upper Mississippi River or even the Mississippi downstream. I didn't list those but they are on record in our inventory of public water supplies dated 1963. They are a matter of record.

MR. STEIN: Are there any other comments

or questions?

If not, thank you very much, Mr. Marshall.

MR. MARSHALL: Thank you.

MR. STEIN: Mr. Poston.

MR. POSTON: That concludes the Federal presentation, Mr. Chairman.

MR. STEIN: Let us recess for ten minutes.

(RECESS)

MR. STEIN: Let's reconvene.

I will call on Wisconsin now. Mr. Wisniewski.

WISCONSIN PRESENTATION

STATEMENT OF THEODORE F. WISNIEWSKI
ASSISTANT TO THE ADMINISTRATOR
DIVISION OF ENVIRONMENTAL PROTECTION
WISCONSIN DEPARTMENT OF NATURAL RESOURCES

MR. WISNIEWSKI: This is a report of the State of Wisconsin to the conferees on the Pollution of the Interstate and Intrastate Waters of the Upper Mississippi River, Wisconsin-Minnesota, dated July 22, 1969.

The initial progress report was made to the conferees on April 30, 1968. This report brings up to date the information on the status of progress towards abatement of pollution of the St. Croix and Mississippi Rivers by Wisconsin communities in the conference area.

St. Croix River

The city of Hudson is in full compliance with the plan for implementation and requirements of the conference.

The village of Osceola, in accordance with requirements, completed construction of secondary treatment facilities in June of 1969 and placed them in operation.

The city of St. Croix Falls, through its consulting engineer, on January 8, 1969, submitted a report of progress for location of excessive infiltration of clear waters to the sanitary sewer. The major source has been located west of Main Street, and a report recommending procedures to be followed to eliminate the infiltration will be submitted before the end of this year. The study of the remainder of the system is continuing.

T. F. Wisniewski

Mississippi River

The village of Pepin consulting engineers advise that all basic data necessary for final design has been collected. An engineer's report with recommendations will be submitted to the village board and the State the first week of August 1969. The engineers advise that they plan to meet the October 1, 1970, compliance date set in the plan for implementation.

The city of Prescott consulting engineers report that the required facilities will be in the final design stage as soon as the city completes acquisition of additional land for a site for the additions. They propose to meet the October 1, 1970, compliance date set in the plan for implementation.

Since the last report conference, the State of Wisconsin has proposed an expanded and improved program of State assistance which a public referendum has supported with an overwhelming margin. Legislation to implement the program is now before the Wisconsin Legislature. Communities in the Upper Mississippi and St. Croix River area will be eligible for State assistance and for an advance of Federal assistance from the State on their pollution abatement projects.

This is respectfully submitted by Theodore F. Wisniewski, Wisconsin Department of Natural Resources.

MR. STEIN: Thank you, Mr. Wisniewski.

Are there any comments or questions?

If not, thank you.

MR. POSTON: Mr. Wisniewski, essentially on the Mississippi River the villages of Prescott and Pepin are a little behind in their planning but they intend to catch up, is that the summation?

MR. WISNIEWSKI: That is the intent of the consulting engineers. They see no reason at the present time for asking for any extension of time.

MR. POSTON: I note in St. Croix Falls that they and Osceola and Hudson have all provided disinfection, but you are not getting reports from St. Croix Falls sewage treatment plant?

MR. WISNIEWSKI: We are now.

MR. POSTON: You are getting them now?

MR. WISNIEWSKI: We weren't in April of 1968.

MR. POSTON: Very good.

MR. WISNIEWSKI: Mr. Harrison of the Wisconsin-Minnesota Boundary Area Commission has requested that he be given an opportunity to enter a statement at this time.

I would like to call on Mr. Harrison.

MR. STEIN: As Mr. Harrison comes up, I would like to indicate what I think the whole schedule might be, that we will continue on until 12:30, then recess for lunch and finish this afternoon, reconvene at 2.

Mr. Harrison.

STATEMENT OF JAMES M. HARRISON
EXECUTIVE DIRECTOR, MINNESOTA-WISCONSIN BOUNDARY AREA COMMISSION, HUDSON, WISCONSIN

MR. HARRISON: Chairman Stein, conferees, ladies and gentlemen.

My name is James Harrison. I am the Executive Director of the Minnesota-Wisconsin Boundary Area Commission, whose offices are in Hudson, Wisconsin.

J. M. Harrison

The Commission has requested that I make the following statement on its behalf.

The Minnesota-Wisc. Boundary Area Commission, which has been represented in this conference as a conferee in past sessions, is pleased to have the opportunity to submit comments at this progress evaluation meeting.

The Commission is generally pleased with the trend toward higher degrees of treatment of municipal and industrial waste discharges in our area of concern. As a matter of policy, recently adopted at La Crosse in its June meeting, the Commission urges the State and Federal agencies to adopt--and dischargers to accept--an effluent standard of 25 milligrams per liter of 5-day (20 degrees C.) BOD and a maximum allowable temperature increase of 5 degrees Fahrenheit above background levels at the point of discharge to the stream channel.

The Commission further believes that as present plans are developed for upgrading and expanding treatment facilities, such plans should allow for efficient and economical progression to tertiary treatment processes where discharge characteristics call for such reductions.

The boundary waters of our two States are unique as a regional resource for commercial navigation, major wildlife and fish management programs, recreational boating, swimming and water skiing, and enjoyment of scenic beauty. In a broad sense, the Commission believes, as we are sure you do, that each user must do his part to maintain the delicate balance which will allow for continuing multiple use of this public resource From a management standpoint, the various agencies must cooperate in promulgating and maintaining uniform standards and effective procedures for convenient and beneficial public use.

There are four areas of concern to the Commission at this juncture which we believe the conferees should try to resolve:

1. The inconsistency with respect to regulations governing discharge of wastes from all watercraft on the boundary waters. Recreational boating has increased tremendously in recent years in our area, especially in the number of boats with marine toilets. Boaters on the St. Croix, where the onshore disposal

standard is now in effect, seem to be complying with this program. It is the Commission's position that in the recreational boundary waters which are classified for all uses, the uncontrolled random discharge of toilet wastes from uninspected boat facilities poses a serious threat to water quality in shallows, backwaters, marinas, and swimming areas. The Commission is now conducting a thorough field study of recreation facilities along the boundary and will gladly advise the conferees on its findings regarding the availability and types of marine toilet pumping facilities. It has also sponsored legislation which has passed the Wisconsin Assembly which will bring the Wisconsin side of the Mississippi River under controls by 1971.

2. Reporting and control of oil spills. The Commission urges the appropriate State and Federal agencies to join in the establishment of a contingency operations plan for identification, evaluation and control of spills in the boundary area waters. We have reviewed the FWPCA proposed plan for the Great Lakes region and believe it offers a good starting point. We feel it ought to have the essential State, local, and

private involvement built in to insure effective coordination and mobilization of resources to protect against accidental disasters. Again, the Commission offers its services as a coordinator and catalyst toward this end.

3. Issuance of "split permits" for discharges. The Commission has gone on record opposing the issuance of a partial permit for certain facets of the NSP nuclear generating plant at Prairie Island near Red Wing. This position was based on the belief that such a practice is inconsistent with sound public policy in that surveillance and control of major discharge sources, which can be difficult under any circumstances, is made infinitely more difficult in a multiple-permit situation. The Commission urges adherence to the practice of issuing comprehensive single permits covering all discharge parameters.

4. Issuance of permits "after the fact." The Commission applauds efforts of the agencies to develop land-use guidelines based on water quality standards, and also the Minnesota approach to building permit prohibitions without PCA-approved treatment facilities. The Commission feels very strongly that the day must

come soon when the final decision regarding the location of major discharge sources having regional environmental effects must be made by regional authorities, rather than be a local governing body.

Thank you for this opportunity to appear. The Commission is available for further consultation and assistance on these matters.

MR. STEIN: Thank you, Mr. Harrison.

Are there any comments or questions?

Let me ask you one for clarification, and if you want this off the record, I will strike it.

I noted your notion about discharge of wastes from all watercraft and your concern that it may pose "a serious threat to water quality in shallows, backwaters, marinas, and swimming areas," yet when you have your restriction on thermal pollution or waste or heat going in, in paragraph two, your only restriction is five degrees Fahrenheit above background levels at the point of discharge to the stream channel. What happens to the possible threat of thermal pollution to those same areas you were concerned about with wastes from watercraft such as shallows, backwaters, marinas, and swimming areas?

MR. HARRISON: Mr. Chairman, I think what the Commission was aiming at here is an ultimate standard that could be applied in any portion of the waterway, and where there are extenuating circumstances because of a specific use where the water quality might have to be even more stringently controlled, that should be applied. This is designed to be what we hope would be a uniform criteria throughout.

MR. STEIN: In other words, your temperature requirement would be a minimum?

MR. HARRISON: Yes.

MR. STEIN: And it might be more stringent in specific areas?

MR. HARRISON: That is what we had in mind, yes.

MR. STEIN: Thank you.

Are there any other comments or questions?

MR. POSTON: Mr. Stein, I might comment briefly on the reporting and control of oil spills and the contingency plan as has been proposed by the Federal agencies. The FWPCA, the Corps of Engineers, the Coast

Guard have developed a contingency plan, and we have met with the State on this, and it is our intent that the contingency plan to be successful must have State cooperation as well as local cooperation. And in the near future we, along with the State and other Federal agencies, will be meeting with some of the local groups to insure a workable contingency plan and an awareness of the overall plan.

MR. HARRISON: Very good, Mr. Poston.

MR. STEIN: Are there any other comments or questions?

MR. PACKARD: Mr. Chairman.

MR. STEIN: Yes.

MR. PACKARD: I would like to ask in connection with item 1 there, the control of marinas in Wisconsin:

Is the legislation you refer to such that would require marinas to have pumping facilities, disposal facilities for all boats using the area?

MR. HARRISON: No, it would not require marinas to have facilities. It would require, as is now the case throughout the other inland waters of

Wisconsin, boats equipped with toilets to have some means of disposing of their wastes onshore or in a manner other than directly into the stream. The experience has been, in our observation, that where the standard was applied on the St. Croix River virtually all the marinas in the area voluntarily, you might say, installed pump-out facilities, and in fact I believe our survey will show that there is a rather broad cross section up and down the river at the present time, mainly on the Minnesota side, where boats can be pumped out at this moment.

MR. PACKARD: But there is no legislation requiring this?

MR. HARRISON: No, that is correct.

MR. GADLER: Mr. Chairman.

MR. STEIN: Yes.

MR. GADLER: In relation to item 3, does the State of Wisconsin take any position on this with your group, your Commission?

MR. HARRISON: With respect to the policy of split permits?

MR. GADLER: Yes.

MR. HARRISON: I personally am not aware

of any instance where a split permit has been issued by the State of Wisconsin in our area. Mr. Wisniewski is probably more qualified to answer this question than I am.

MR. STEIN: Are there any--

MR. WISNIEWSKI: Please define exactly what you mean by a split permit.

MR. HARRISON: Mr. Wisniewski, what we have in mind is where an industry or a discharger might come in and ask for a permit to discharge a certain type of waste or effluent into the stream where in fact he may be discharging other wastes for which he would apply for a separate permit. For example, a discharge permit for, let's say, raw sewage--or not raw sewage but treated sewage and a separate permit for thermal waste.

MR. WISNIEWSKI: Well, basically, our law in Section 144.55 of the Wisconsin Statute requires that any new industry or any existing industry which proposes to expand its facilities or change a location of any of its sewers must present a report to the Department indicating what changes it proposes to make, what wastes it will be producing, how these wastes will be treated to prevent pollution of the receiving waters, and it is not permitted to commence construction of a manufacturing or industrial facility until after it has received approval from the Department. This is with reference to industrial wastes. This requires direct approval.

The same would hold true for sewage wastes from that industry. The minute they came in for a permit on industrial wastes, we would naturally be concerned with the discharge of sewage from that particular installation. This is, however, true only of discharges that are made directly to the stream. If an industry connects to a municipality, it is not required to submit a report under that law. However, we have our municipalities adopt ordinances which regulate the types of industrial wastes that they will accept.

MR. STEIN: Any other comment or question?

Mr. Harrison, you have one suggestion for the conferees here--that the conferees try to resolve the inconsistency with respect to regulations governing discharge of wastes from all watercraft, at least on boundary waters in your jurisdiction. Now, the conferees have had this problem several times before,and

I think since you bring it up in the record just let me outline what the problem is.

In some of the contiguous waters we have a situation which may be somewhat different than in other States which are contiguous. There is a little different philosophy in Minnesota than Wisconsin. In Wisconsin they require holding tanks and presumably a discharge into a pump-out facility onshore. In Minnesota I guess you can use a macerator/chlorinator and meet the requirements. Unless the conferees want to do this at this time, we have not resolved this issue, and I know we have had statements before. I don't know how pertinent the push is for this, but people in one State have gone to another State and have been apprehended and fined because the boat regulation was different.

Now, again this is a matter that I think we recognize has not been resolved. If the conferees want to take it up, fine. Or the whole question may become moot because there is Federal legislation percolating through and the Federal Government may be charged with the control of this whole matter.

Are there any other questions?

MR. GADLER: One other question.

In item no. 4 you state, "The Commission feels very strongly that the day must come soon when the final decision regarding the location of major discharge sources having regional environmental effects must be made by regional authorities, rather than by a local governing body."

Would you amplify that?

MR. HARRISON: I think, Mr. Gadler, what the Commission has in mind here is situations regarding large facilities like powerplants where in the first instance the location might be basically the design of the power company, assuming that they might not even need a local building permit. This may not be true so much for nuclear plants that an AEC approval for construction is required; I am not too familiar with that procedure.

But this is something that I believe has raised the problem in the past, could again, maybe now, and the question becomes quite academic once several million dollars worth of plant are built. And I believe what we are looking for here is a broader analysis prior to a final decision as to where these facilities are located.

To give you an example, the Upper Mississippi River comprehensive basin study, which has been under way for some years, is now nearing completion, already is showing indications that the Mississippi River will be the primary source of power far inland for many of the States which border on it. For example, in the Des Moines River Basin in Iowa, where studies have already been done as to the demands, the needs and the supply for cooling water, the indication is that where the demand cannot be met within the Des Moines River Basin in the interior of the State plants will have to be built on the Mississippi River and that the stream could be loaded considerably up and down in a ladder effect as the States gravitate toward it. It is this kind of indication which leads us to believe that there should be some broader consideration of these matters than are now applied by just local jurisdictions.

MR. STEIN: Are there any comments or questions on that?

You know, Mr. Harrison, let me make a

very brief one here, because I think you have raised a very interesting point that we are finding in many, many cases, not only with wastes coming from powerplants but wastes coming from all sources. I think this has been acute.

For example, in the Potomac we very well may have the same situation as in Lake Erie and other places where we have critical pollution problems. For example, in the Potomac they have pushed for changing of the discharge points. Some people have said--and I am saying this in a quote--"If they carefully selected the point, a pound of BOD in one place would do 1/10 the damage that it might do in another place." Now, as the population grows and as we get into these real, real critical areas of concentrated growth, we are going to possibly find that we have to do two things that we haven't done before, not only to provide a relatively high degree and sophisticated degree of treatment, but also provide, as we talked about earlier, possibly low flow augmentation, and, thirdly, to make a very careful determination of where in this drainage system or this water system we are going to permit the flow of the discharge of the wastes.

Again let me give you one case where this was spectacular. I think site selection or at least selection of disposal area very often is going to be the key to pollution control and environmental control. I don't want this singled out because I referred to this industry before, but when we had a radioactive pollution problem on the Colorado River, we found that originally the mills, the uranium mills, did what was natural and they got to the towns which were in the river right down at the bottom of the ravine where they were either discharging to the river or had a dike that broke into the river and we had quite a problem. With the cooperation of the States and the industry that problem has been corrected.

But Wyoming developed a uranium milling industry considerably later than the other States, and the way that was solved was a very careful restriction of the sites and putting them over the mesa, not in the gorges where the water ran, so they could put the wastes on dry land and the question of the diked area was not very critical because it didn't go very far and you could pick it up. And we had no radioactive contamination of the surface rivers in Wyoming, and this was from the beginning, just because of real careful site selection and the recognition of the problem that the other States had.

So I do think, Mr. Harrison, you are pointing to another key area in pollution control.

MR. HARRISON: Thank you, Mr. Chairman. I just wanted to add that I had no particular reason to single out the power industry as an example here except that it is pertinent to this discussion.

MR. STEIN: Right. Are there any other comments or questions?

If not, thank you very much.

MR. HARRISON: Thank you.

MR. STEIN: Wisconsin?

MR. WISNIEWSKI: This completes the Wisconsin presentation.

MR. STEIN: May we now call on Minnesota? Mr. Badalich.

MINNESOTA PRESENTATION

STATEMENT OF JOHN P. BADALICH
DIRECTOR, MINNESOTA POLLUTION CONTROL AGENCY, MINNEAPOLIS, MINNESOTA

MR. BADALICH: Thank you, Mr. Stein, fellow conferees, ladies and gentlemen.

I did pass out a copy of our statement and also letters of people that would like to make an appearance on behalf of the State of Minnesota, and I also have another list of other people that will make a verbal presentation here, I suppose this afternoon.

I will continue with the Agency's statement and it is as follows.

The Agency appreciates the opportunity to participate in this meeting and set forth for the record certain changes such as in responsibility for water pollution control in the Twin Cities metropolitan area, as well as to present a summary of our progress in control of water pollution in this area since the third session of the conference which was held in April 1968.

J. P. Badalich

The Legislature, in May 1969, expanded the Agency to nine members, one of whom must be knowledgeable in the field of agriculture. It is expected that the two new members will soon be appointed by Governor LeVander.

The conferees again are Mr. Robert C. Tuveson, Chairman of the Agency; Messrs. Steve J. Gadler and F. Wayne Packard, Agency members; and myself, Mr. John P. Badalich, Executive Director.

Considerable progress has been made since the previous conference toward fulfillment of the recommendations contained in the second conference summary of June 17, 1967, and the supplemental summary of July 26, 1968. The existing standards for these waters (Regulation WPC 1, 2 and 3) were submitted to Secretary Udall by Governor LeVander as part of Minnesota's proposed interstate water quality standards on June 30, 1967, and our proposal included recognition of the conference recommendations, as well. Since receiving approval by the Secretary of the Interior of our interstate standards, numerous meetings have taken place with personnel of the Federal Water Pollution Control Administration and others concerned regarding the exceptions taken. It is our understanding that we have reached agreement on all items and that prospects for complete approval of the standards by the Secretary are excellent. We have heard since from Commissioner Dominick that some formal clarification of a few points will be required. To the best of our knowledge all necessary action will then have been taken on our part to obtain final, complete acceptance by the Secretary.

The lack of formal complete approval of these standards presents serious problems of enforcement to our Agency and we wish the conferees to note that we need action by the Department of the Interior on these standards. The changes under discussion include these waters, for which standards had previously been established, as well as any previously unclassified interstate waters.

The following comments regarding remaining items in question are given in the same order and refer to the identically numbered recommendation in the Summary of June 17, 1967. You may wish to have the recommendations before you as you follow my comments.

Please note that some items have been omitted, having been dealt with adequately on the previous conference.

Recommendation No. 3.

This treatment requirement has been used by the Agency as a minimum requirement throughout the conference area and in some cases even more stringent effluent standards have been adopted. This is elaborated upon in items 11 and 18 which follow, and also you will see Attachments A, B, C and D, which are the Agency effluent standards, Regulations WPC 18, 19, 20 and 21. These regulations, which have been adopted, require installation of treatment works sufficient to satisfy the general as well as the specific recommendations. Orders to enforce the standards have also been issued.

Recommendation No. 4.

There are now eighteen municipal or similar sources on the main stems in the conference area for which regular monthly plant reports are being provided, an increase of three over last year. The newly reporting sources are Hastings, Lake City and Taylors Falls, leaving only Bayport. Further action will be taken with regard to the other delinquent sources to require regular monthly reporting and to achieve 100 percent compliance with this recommendation.

Recommendation No. 5.

It is the policy of the Agency to require adequate capacity and maximum flexibility of individual treatment units in the design of all municipal waste treatment facilities. Because of the existing high quality of the waters of Lake St. Croix and the need for preserving the same, we have informed Stillwater, Bayport and Oak Park Heights that nutrient removal should be provided in the very near future.

Recommendation No. 8.

The Minneapolis-St. Paul Sanitary District (MSSD) is planning to undertake a study aimed at reduction of possible detrimental effects from industrial wastes.

Recommendation No. 9.

Minnesota has had in effect for a number of years a regulation for control of stored liquids capable of polluting waters of the State, and legislation recommended to require recovery of spilled materials was passed by the 1969 Legislature. However, the accompanying request for a fund of $50,000 to provide standby equipment and supplies and obtain manpower when needed for oil recovery was not approved. Consequently, we are in the position of having all of the basic essentials of a good oil spill control program except the money and manpower to carry through with recovery in the event of default by those responsible for the loss. The recent loss of oil from a barge accident on the Mississippi River at Alma, Wisconsin, illustrated the need for further improvements. It was apparently only through good fortune, in the form of the light nature of the oil, that much more serious damage did not result.

We received last year no additional plans for more liquid storage sites in the conference area, making a total of eleven still on hand. The budget and staff proposed for this program were not approved and the work has necessarily had to be given a very low priority.

Recommendation No. 10.

The Agency does not normally approve permit applications for combined sewers. St. Paul has started a planning study of a broad program of improvements to existing combined sewers and operating procedures, together with partial sewer separation, as the first stage toward elimination of sewage overflows directly to the river, and a preliminary report on Phase I has been received. It is understood that the city is planning to proceed with the necessary detailed studies, but progress is being hampered because these studies must take into account the results of the MSSD's research and development study on use of the interceptors for storage. The results apparently will not be available for some time yet. Thus, it is unlikely that St. Paul will be able to have all of their studies completed by June 1970. Minneapolis has had a sewer separation program in effect for many years, and as reported previously has a ten-year program which should result in elimination of all combined sewers at the end of that period. South St. Paul is involved in research and studies on surface and underground storage of combined wastes and a preliminary separation study has been received. The MSSD is continuing with its special study project on the use of the interceptors for storage so as to avoid overflow to the river, and a report is expected very soon. The status of the other municipalities is given in Attachment F affixed to this report.

Recommendation No. 12.

Twenty-one industries in the conference area are now submitting regular monthly reports, an increase of eleven from last year. The delinquents will be notified again of this requirement and more vigorous action will be taken to obtain 100 percent compliance. The only substantial industrial treatment works currently not submitting reports is the Hudson Manufacturing Company of Hastings, Minnesota.

Recommendation No. 13.

We have been advised by our legal counsel that the Agency probably does not have the authority to require installations on watercraft not licensed by Minnesota. Based on our experience with this problem, we reiterate our belief that it is not realistic to expect a State to exert control over watercraft which are not licensed by that State, but are instead documented or registered with the Federal Government. Control over watercraft of this kind, as well as foreign vessels, should be exercised primarily by the Federal agencies having jurisdiction rather than by the States. It is our understanding that the National Sanitation Foundation has published criteria for sewage treatment devices to be used on watercraft, including macerator/chlorinator devices. We endorse these criteria and urge that the conferees do the same for application to the interstate waters under consideration here, so that Minnesota boaters can safely use these devices in the Minnesota-Wisconsin boundary waters. We ask that Minnesota be given full faith and credit in regard to our formally approved devices when used in our waters as we do to others, and strongly urge adoption of a recommendation for a reciprocal arrangement to this end. As an illustration of our good faith in this matter, the 1969 Legislature approved a measure directing the Agency to extend approval to devices approved by other governmental agencies when used in Minnesota. Again I have an attachment of the law relating to this passed legislation. We strongly urge that our neighbors join us in reciprocal action.

Recommendation No. 14.

Cooperation has been demonstrated by the owner of one more dump located in the river flood plains, bringing the total to seven. More detail on these projects is given in Attachment G.

Recommendation No. 15.

We are continuing to require upgrading of treatment in these reaches as part of the Implementation and Enforcement Plan of the Interstate Water Quality Standards and will start formal enforcement hearings where necessary as soon as the standards are approved by the Secretary.

Recommendation No. 16.

The matter of allowable biochemical oxygen demand (BOD) loadings on the reach of the Mississippi River below the MSSD outfall has been the subject of continuing discussion. Further studies of possible alternate plant locations and the effect of their effluents on the river both above and below the MSSD were made recently in connection with the application of the North Suburban Sanitary Sewer District (NSSSD) for a permit to construct a plant in Fridley. Since both the Metropolitan Council and the MSSD will later present statements on their programs, I shall not comment further now except to note that recent events concerning the creation of the Council's Sewer Board and submission of the MSSD's report are most encouraging and we fully expect that any remaining problems in this reach will be resolved soon.

Orders were issued to South St. Paul in January 1969 to conform with recommendations of the conferees and requirements of Regulation WPC 18 by June 1971. Subsequently, at the request of the city, the Agency extended the completion date for conformance with the conference recommendations to July 1972.

The city is presently engaged in the first phase of a three-phase program to upgrade the sewage treatment facilities. Studies are being conducted on the use of polymers and some modifications and additions to the treatment works have been completed. I believe the city of South St. Paul will elaborate on this a little later.

Recommendation No. 17.

This matter has not yet been resolved and probably cannot be for some time, because the MSSD treatment works referred to have not yet been placed in full operation. We suggest that further consideration of this item be deferred for at least two or three years in order to allow the river to reach a new stage of equilibrium after full operation of these works is attained. We later will ask the MSSD representatives to elaborate on the operational status of their plant.

Recommendation No. 19.

A new secondary sewage plant was placed in operation at Hastings in July 1968. This recommendation therefore is no longer relevant.

Recommendation No. 20.

Limited treatment by the Minneapolis Water Department of lime sludge is currently being provided by sedimentation basins. Full scale treatment of backwash from the Fridley plant is provided by equipment recently installed on an experimental basis. The city has been notified that treatment of the wastes from both the Fridley and Columbia Heights plants to conform with the recommendations of the conferees and Regulation WPC 21 must be accomplished by June 1970. The engineering study is near completion. The water department has indicated that it has a problem concerning acquisition of the land needed for facilities to treat wastes from the Columbia Heights plant. The department probably will request a one-year extension of time for completion of the total project.

Recommendation No. 21.

Presently from 3.0 to 4.5 million gallons per day cooling and area runoff waters are discharged directly by Armour and Company to the Mississippi River. Sanitary sewage and industrial process wastes are discharged to the municipal sanitary sewer system. The company was notified of the conferees' recommendations and on January 6, 1969, an order was issued by the Agency requiring the company to provide treatment to meet the effluent requirements of State Regulation WPC 18 or discharge all wastes to the municipal sanitary sewer system by June 1971. Subsequently, a variance from the effluent requirements and time limitations of WPC 18 was requested by the company but denied by the Agency.

The company has made numerous in-plant improvements to reduce wastes and water usage, and has indicated its intention to discharge all wastes to the municipal sanitary sewer system when alterations and additions to the municipal treatment plant have been completed. Monthly reports are furnished regularly, and apparently with some further in-plant improvements the wastes could meet the recommendations.

From 2.0 to 2.5 MGD wastewater from cattle pens and other area drainage is discharged by the St. Paul Union Stockyards Company directly to the Mississippi River. A substantial amount of the same type of wastewater and sanitary sewage is discharged to the municipal sanitary sewer system. The company has been informed of the recommendations of the conferees and on January 6, 1969, was ordered by the Agency to provide treatment to comply with WPC 18 or discharge all wastes to the city system by June 1971. Subsequently, a request by the company for a variance from the effluent requirements and time limitations of WPC 18 was denied.

The company has also initiated procedures to cut down wastes and water usage. All truck washing wastes are now discharged to the city sanitary sewer system. Sewers to carry all waste to the city sanitary sewer system have been constructed for use when additions and alterations to the municipal treatment facilities are completed. Cattle pens are now dry-cleaned and washed down manually. Manure is deposited in a dump.

About 2.5 MGD of what is essentially cooling water and area drainage is discharged to the Mississippi River by Swift and Company. Sanitary sewage and industrial process wastes go to the city sanitary sewer system. The company has been ordered by the Agency to provide treatment for wastes discharged directly to the river to meet recommendations of the conferees and requirements of WPC 18 or discharge all wastes to the city system by June 1971. A company request for a variance from WPC 18 was denied. During recent years the company has provided in-plant improvements to reduce wastes and water usage. A new sewer to convey all of the plant wastes to the municipal sanitary sewer system has been constructed for use when additions and improvements to the municipal treatment facilities are completed. Monthly reports indicate the discharge with few exceptions meets the recommendations. The company recently announced its intentions to close this plant permanently this November.

Recommendation No. 22.

The Cenex, Inc., plant has been taken out of production.

Recommendation No. 23.

The S. B. Foot Tanning Company at Red Wing has been awarded a research and development grant for design and construction of treatment facilities. A preliminary engineering report has been received and final construction plans are expected soon.

Recommendation No. 25.

The American Crystal Sugar Company has essentially a closed system for process wastes. During the spring flush when supernatant from the sludge pond is discharged, the river is monitored for dissolved oxygen and BOD content to be sure to comply with the river standards.

On January 6, 1969, the Agency issued an order to the company requiring compliance with WPC 19 by June 1971. The company requested a variance to permit discharges to the river from the transport water sludge pond in order to control odors during the spring flush, and discharge of cooling water not in conformity with the effluent standards when the quality of the water taken in from the river is below the standards. The

Agency granted the request.

The company is currently making plans for installation of facilities for handling spent lime on a dry basis, and has indicated that necessary changes will be made in-plant before the 1971-1972 campaign so that the cooling water discharge will meet requirements.

Recommendation No. 26.

The Rahr Malting Company has diverted its process wastes into the Shakopee system for treatment. The Agency issued an order to Shakopee in January 1969 to provide secondary treatment by June 1970. In a subsequent action by the Agency, at the request of the city, the date for completion of the facilities was extended to December 1970. The city has employed a consulting engineer to design the facilities and a preliminary report has been submitted. However, it appears more likely now that an interceptor will be constructed instead to divert the sewage into the proposed Southwest Sanitary Sewer District (SWSD) plant.

A brief resumé of the status of the remaining nonconforming sources which were listed in our previous statement follows:

J. P. Badalich

Anoka has had final plans approved for construction of expanded facilities. Financing arrangements have been completed and construction is under way.

Northwestern Refining Company received an order in December 1968 to provide necessary improvements by June 1971. At the request of the company, the Agency subsequently agreed to allow the company until August 1, 1969, to submit a report on studies being made to determine how to meet the requirements of State Regulation WPC 18. The report is nearly ready.

St. Paul Park has a secondary sewage treatment plant which was constructed in 1954 and additions and alterations were provided in 1965. The village has been requested to improve the operation of the plant to comply with recommendations of the conferees. Incomplete reports on operation are furnished and it cannot be said definitely that they are yet in conformance. And since then the Agency staff has made several analyses of the St. Paul Park plant, and the BOD requirement as outlined in the recommendations is not being met at this particular time.

Minnesota Mining and Manufacturing

received an order requiring the company to comply with the effluent standards of WPC 18 by June 1971. Subsequently, by action of the Agency, the company was given until June 1971 to provide the additional treatment facilities necessary to obtain an effluent in accordance with recommendations of the conferees, with later review regarding conformance with State Regulation WPC 18.

Cottage Grove recently completed alterations and additions to the existing facilities.

Honeymead Products Company received an order in January 1969 to provide adequate treatment or direct their wastes into the city sanitary sewer system by June 1971. The company has indicated they are working to improve the existing treatment facilities, and that it is their intention to connect to the city system when engineers for the city have set standards for such discharge. It is reported that consulting engineers for the city have now provided the company with such standards.

Mankato received an order in January 1969 to provide secondary treatment by June 1971. The city requested an additional six months for construction and their request was granted.

J. P. Badalich

The city has hired a consulting engineer and is proceeding with studies and preparation of plans for expansion of the sewage treatment plant.

Henderson was issued an order in January 1969 to provide adequate sewage treatment by June 1970.

Engineers for the village submitted final plans for a secondary treatment plant in March 1969. The plans have been approved, and it is understood that bids on the project have been received and contracts have been awarded.

The M. A. Gedney Company received an order on January 6, 1969, to provide treatment in conformance with State Regulation WPC 19 and recommendations of the conferees by June 1971. The company has employed a consulting engineer and has indicated its intention to comply.

Stillwater has had final plans for expansion of the sewage treatment facilities to provide secondary treatment approved, and has applied for a construction grant. The city requested and received a six-month extension of time for submission of an engineering report on sewer separation.

J. P. Badalich

The summary of July 26, 1968, in general reiterated the previous recommendations and indicated that the completion date of June 17, 1971, should be met for all facilities, including the MSSD. Up to this date, departures from the overall recommended completion date for treatment works have been authorized by the Agency only as follows:

Name and Location	Description
South St. Paul	Extension to July 1972.
Mankato	Extension to December 1971.
American Crystal Sugar Co.	Spring release of sludge pond supernate.

I wish to now call to the attention of the conferees a major change in the organizational structure of the governmental apparatus in the Twin Cities metropolitan area concerning control of sewage and waste disposal facilities.

Chapter 449, Laws of 1969, provides for the creation of a Metropolitan Sewer Board under the Metropolitan Council having the authority to take over existing trunk sewers and treatment works in the entire seven-county metropolitan area and to plan and design for and construct and operate such works. The major portion of the sources of sewage or wastes under consideration by this conference will be included under the Metropolitan Sewer Board's operating authority.

It is our feeling that this is a very important piece of legislation and will at long last provide for systematic planning and resolution of sewage and waste disposal problems on a regional basis.

The Agency views the Metropolitan Council as the primary authority with which it will deal henceforth in matters of water pollution control in this area. The Board and the Council will be responsible for interim and long-range planning and will also become directly responsible for the largest discharges of wastes to these waters. The Agency will be cooperating with the Council in development of plans and projects, and will expect the Council to assume a leadership role in providing adequate treatment works in accordance with the recommended schedules.

The representative of the Council who is here today will elaborate on this subject, I am sure, in more detail later in the meeting.

J. P. Badalich

In summary, based on the listing of the fifty-five Minnesota sources of sewage or industrial wastes, which was published in the Summary Report of the Twin Cities-Upper Mississippi River Project on page 23 of the Conclusions, and the recommendations included in the conference summaries of June 17, 1967, and July 26, 1968, it appears that all of those listed are in substantial conformance with respect to interstate waters insofar as present treatment capability is concerned, except the following:

MISSISSIPPI RIVER

1. Anoka
2. Minneapolis Water Department
3. Minneapolis-St. Paul Sanitary District
4. Swift and Company
5. St. Paul Union Stockyards Company
6. Armour and Company
7. South St. Paul
8. Northwestern Refining Company
9. St. Paul Park

MINNESOTA RIVER

10. Honeymead Products Company

J. P. Badalich

11. Mankato
12. Henderson
13. M. A. Gedney Company
14. American Crystal Sugar Company
15. Shakopee

ST. CROIX RIVER

16. Stillwater

Thus, there remain now only sixteen significant sources to be reduced, or put in another way, seventy-one percent of the sources originally listed have either made sufficient improvement in their treatment in the past year to become satisfactory or do not discharge wastes of any significance to interstate waters.

In addition, positive action is either already under way or there is an effective commitment to proceed with adequate disposal works on the part of all of the remaining sources cited, except possibly St. Paul Park.

From our recent investigations it appears that St. Paul Park probably is in compliance. I think this was verified that they are not at this time.

However, further investigation will be made and if this is not confirmed, an order will be issued to St. Paul Park to comply under our Regulation WPC 18.

In the interest of brevity, we have discussed in this statement only those sources which were previously listed or specifically mentioned in recommendations or others which seemed to warrant special mention. However, information on any of the other sources also will be furnished as may be desired.

It is the consensus of the Agency that Minnesota's progress in providing sewage and waste treatment works in this area is excellent and will continue under a full head of steam. The agency wishes to assure you that we will achieve early conformance with the recommendations so that these waters will be maintained and enhanced as desired.

Along with this statement, Mr. Chairman, I do have the attachments as listed on page 15 of the report.

MR. STEIN: This, without objection, will be included in the record as if read.

(Which attachments are as follows:)

Attachments (7):

A. Regulation WPC 18
B. " " 19
C. " " 20
D. " " 21
E. 1969 revision of Boat Head Act
F. Status of combined sewer separation
G. Status of refuse disposal

MINNESOTA ADMINISTRATIVE RULES AND REGULATIONS

Rules, Regulations, Classifications and Water Standards

MINNESOTA POLLUTION CONTROL AGENCY

1969 SUPPLEMENT

Minn. Reg. WPC 18

Filed with the Secretary of State
and Department of Administration September 26, 1968

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Room 140 Centennial Building, St. Paul, Minnesota 55101

CHAPTER EIGHTEEN: WPC 18

EFFLUENT STANDARDS FOR DISPOSAL SYSTEMS DISCHARGING TO THE MISSISSIPPI RIVER FROM THE OUTFALL OF THE MINNEAPOLIS - ST. PAUL SANITARY DISTRICT SEWAGE TREATMENT PLANT TO LOCK AND DAM NO. 2 NEAR HASTINGS

WPC 18 The following standards of effluent quality and purity are hereby adopted and established for that portion of the Mississippi River from the outfall of the Minneapolis-St. Paul Sanitary District sewage treatment plant in the City of St. Paul, approximately at the eastward extension of Baker Street East in said city, to the U. S. Lock and Dam No. 2 above Hastings.

(a) **Definitions.** The terms "person," "sewage," "industrial wastes," "other wastes," "treatment works," "disposal systems," and "waters of the state," as well as any other pertinent terms for which definitions are given in the water pollution control statutes, as used herein have the meanings ascribed to them in Minnesota Statutes (1967), Chapter 115. Other terms and abbreviations used herein not specifically defined in the law shall be construed in conformance with the context and professional usage.

(b) **Standards.** It is hereby established as a minimum requirement applicable to all persons responsible for disposal systems discharging sewage, industrial waste or other waste effluents to the above-delineated waters, or which may affect these waters, that from May 1 through October 31 there shall be effective continuous chlorination of sewage and other effluents containing viable pathogenic organisms. It is further established that all effluents shall be treated prior to discharge so as to meet the following limiting permissible concentrations:

Substance or Characteristic	Limiting Concentration
5-day biochemical oxygen demand	35 milligrams per liter
Total suspended solids	30 milligrams per liter
Total coliform group organisms	5,000 most probable number per 100 milliliters
Oil	10 milligrams per liter
Turbidity	25

(c) **Monthly Reports.** All persons operating sewage, industrial waste or other waste disposal systems adjacent to or discharging to the waters covered by this Regulation shall submit every month a report to the Minnesota Pollution Control Agency on the operation of such disposal system, the effluent flow, and the characteristics and concentrations of the effluents and receiving waters. Sufficient data on measurements, observations, sampling and analyses, and other pertinent information shall be furnished as may be required by the Agency to reflect adequately the condition of the disposal system, the effluent and the waters receiving the effluent.

(d) **Determination of Compliance.** In making tests or analyses of the sewage, industrial wastes or other wastes to determine compliance with the standards, samples shall be collected in such manner and place, and of such type, number and frequency as may be considered satisfactory by the Agency. No allowance will be made for dilution of the effluents in the waters of the state into which they are discharged. The samples shall be preserved and analyzed in accordance with procedures given in the Standard Methods for the Examination of Water and Waste-Water, by the

American Public Health Association, American Water Works Association, and the Water Pollution Control Federation, or other methods acceptable to the Agency.

(e) **Variance.** Where upon written application of the responsible person or persons and after public hearing the Agency finds that, by reason of exceptional circumstances, strict conformity with any provision of these standards would cause undue hardship, would be unreasonable, impractical or not feasible under the circumstances, the Agency may by Order grant a variance from these standards to such person or persons upon such conditions and within such time limitations as it may prescribe for prevention, control or abatement of pollution in harmony with the intent of state and federal laws.

MINNESOTA ADMINISTRATIVE RULES AND REGULATIONS

Rules, Regulations, Classifications and Water Standards

MINNESOTA POLLUTION CONTROL AGENCY

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CHAPTER NINETEEN: WPC 19

EFFLUENT STANDARDS FOR DISPOSAL SYSTEMS DISCHARGING TO THE MINNESOTA RIVER FROM ABOVE CHASKA TO THE JUNCTION WITH THE MISSISSIPPI RIVER AT FORT SNELLING

WPC 19 The following standards of effluent quality and purity are hereby adopted and established for that portion of the Minnesota River from the Chaska Village south boundary to the junction with the Mississippi River at Fort Snelling.

(a) **Definitions.** The terms "person," "sewage," "industrial wastes," "other wastes," "treatment works," "disposal systems," and "waters of the state," as well as any other pertinent terms for which definitions are given in the water pollution control statutes, as used herein have the meanings ascribed to them in Minnesota Statutes (1967), Chapter 115. Other terms and abbreviations used herein not specifically defined in the law shall be construed in conformance with the context and professional usage.

(b) **Standards.** It is hereby established as a minimum requirement applicable to all persons responsible for disposal systems discharging sewage, industrial waste or other waste effluents to the above-delineated waters, or which may affect these waters, that from May 1 through October 31 there shall be effective continuous chlorination of sewage and other effluents containing viable pathogenic organisms. It is further established that all effluents shall be treated prior to discharge so as to meet the following limiting permissible concentrations:

Substance or Characteristic	Limiting Concentration
5-day biochemical oxygen demand	25 milligrams per liter
Total suspended solids	30 milligrams per liter
Total coliform group organisms	5,000 most probable number per 100 milliliters
Oil	10 milligrams per liter
Turbidity	25

(c) **Monthly Reports.** All persons operating sewage, industrial waste or other waste disposal systems adjacent to or discharging to the waters covered by this Regulation shall submit every month a report to the Minnesota Pollution Control Agency on the operation of such disposal system, the effluent flow, and the characteristics and concentrations of the effluents and receiving waters. Sufficient data on measurements, observations, sampling and analyses, and other pertinent information shall be furnished as may be required by the Agency to reflect adequately the condition of the disposal system, the effluent and the waters receiving the effluent.

(d) **Determination of Compliance.** In making tests or analyses of the sewage, industrial wastes or other wastes to determine compliance with the standards, samples shall be collected in such manner and place, and of such type, number and frequency as may be considered satisfactory by the Agency. No allowance will be made for dilution of the effluents in the waters of the state into which they are discharged. The samples shall be preserved and analyzed in accordance with procedures given in the Standard Methods for the Examination of Water and Waste-Water, by the American Health Association, American Water Works Association, and the Water Pollution Control Federation, or other methods acceptable to the Agency.

(c) **Variance.** Where upon written application of the responsible person or persons and after public hearing, the Agency finds that, by reason of exceptional circumstances, strict conformity with any provisions of these standards would cause undue hardship, would be unreasonable, impractical or not feasible under the circumstances, the Agency may by Order grant a variance from these standards to such person or persons upon such conditions and within such time limitations as it may prescribe for prevention, control or abatement of pollution in harmony with the intent of state and federal laws.

MINNESOTA ADMINISTRATIVE RULES AND REGULATIONS

Rules, Regulations, Classifications and Water Standards

MINNESOTA POLLUTION CONTROL AGENCY

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CHAPTER TWENTY: WPC 20

EFFLUENT STANDARDS FOR DISPOSAL SYSTEMS DISCHARGING TO THE MINNESOTA RIVER FROM MANKATO TO CHASKA

WPC 20 The following standards of effluent quality and purity are hereby adopted and established for that portion of the Minnesota River from the mouth of the Blue Earth River in Mankato, to the Chaska Village south boundary.

(a) **Definitions.** The terms "person," "sewage," "industrial wastes," "other wastes," "treatment works," "disposal systems," and "waters of the state," as well as any other pertinent terms for which definitions are given in the water pollution control statutes, as used herein have the meanings ascribed to them in Minnesota Statutes (1967), Chapter 115. Other terms and abbreviations used herein not specifically defined in the law shall be construed in conformance with the context and professional usage.

(b) **Standards.** It is hereby established as a minimum requirement applicable to all persons responsible for disposal systems discharging sewage, industrial waste or other waste effluents to the above-delineated waters, or which may affect these waters, that from May 1 through October 31 there shall be effective continuous chlorination of sewage and other effluents containing viable pathogenic organisms. It is further established that all effluents shall be treated prior to discharge so as to meet the following limiting permissible concentrations:

Substance or Characteristic	**Limiting Concentration**
5-day biochemical oxygen demand	50 milligrams per liter
Total suspended solids	30 milligrams per liter
Total coliform group organisms	5,000 most probable number per 100 milliliters
Oil	10 milligrams per liter
Turbidity value	25

(c) **Monthly Reports.** All persons operating sewage, industrial waste or other waste disposal systems adjacent to or discharging to the waters covered by this Regulation shall submit every month a report to the Minnesota Pollution Control Agency on the operation of such disposal system, the effluent flow, and the characteristics and concentrations of the effluents and receiving waters. Sufficient data on measurements, observations, sampling and analyses and other pertinent information shall be furnished as may be required by the Agency to reflect adequately the condition of the disposal system, the effluent and the waters receiving the effluent.

(d) **Determination of Compliance.** In making tests or analyses of the sewage, industrial wastes or other wastes to determine compliance with the standards, samples shall be collected in such manner and place, and of such type, number and frequency as may be considered satisfactory by the Agency. No allowance will be made for dilution of the effluents in the waters of the state into which they are discharged. The samples shall be preserved and analyzed in accordance with procedures given in the Standard Methods for the Examination of Water and Waste-Water, by the American Public Health Association, American Water Works Association, and the Water Pollution Control Federation or other methods acceptable to the Agency.

(e) **Variance.** Where upon written application of the responsible person or persons and after public hearing the Agency finds that by reason of exceptional circumstances strict conformity with any provision of these standards would cause undue hardship, would be unreasonable, impractical or not feasible under the circumstances, the Agency may by Order grant a variance from these standards to such person or persons upon such conditions and within such time limitations as it may prescribe for prevention, control or abatement of pollution in harmony with the intent of state and federal laws.

MINNESOTA ADMINISTRATIVE RULES AND REGULATIONS

Rules, Regulations, Classifications and Water Standards

MINNESOTA POLLUTION CONTROL AGENCY

1969 SUPPLEMENT

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CHAPTER TWENTY-ONE: WPC 21

EFFLUENT STANDARDS FOR DISPOSAL SYSTEMS DISCHARGING TO THE MISSISSIPPI RIVER FROM THE JUNCTION OF THE RUM RIVER TO THE OUTFALL OF THE MINNEAPOLIS-ST. PAUL SANITARY DISTRICT SEWAGE TREATMENT PLANT, AND FROM LOCK AND DAM NO. 2 NEAR HASTINGS, TO THE JUNCTION WITH THE CHIPPEWA RIVER, AND TO THE ST. CROIX RIVER FROM TAYLORS FALLS TO THE JUNCTION WITH THE MISSISSIPPI RIVER

WPC 21 The following standards of effluent quality and purity are hereby adopted and established for that portion of the Mississippi River from the mouth of the Rum River in the City of Anoka, to the outfall of the Minneapolis-St. Paul Sanitary District sewage treatment plant in the City of St. Paul, and from the U. S. Lock and Dam No. 2 above Hastings to the mouth of the Chippewa River at the lower end of Lake Pepin near the Village of Wabasha, and that portion of the St. Croix River from the Nevers Dam in Taylors Falls, approximately at the eastward extension of the boundary between Sections 24 and 25, Shafer Township, Chisago County, to the junction with the Mississippi River near Hastings.

(a) **Definitions.** The terms "person," "sewage," "industrial wastes," "other wastes," "treatment works," "disposal systems," and "waters of the state," as well as any other pertinent terms for which definitions are given in the water pollution control statutes, as used herein have the meanings ascribed to them in Minnesota Statutes (1967), Chapter 115. Other terms and abbreviations used herein not specifically defined in the law shall be construed in conformance with the context and professional usage.

(b) **Standards.** It is hereby established as a minimum requirement applicable to all persons responsible for disposal systems discharging sewage, industrial waste or other waste effluents to the above-delineated waters, or which may affect these waters, that there shall be year-round effective continuous chlorination of sewage and other effluents containing viable pathogenic organisms which are discharged at or above public water supply intakes, and effective continuous chlorination from May 1 through October 31 of sewage and other effluents containing viable pathogenic organisms which are discharged to other reaches. It is further established that all effluents shall be treated prior to discharge so as to meet the following limiting permissible concentrations:

Substance or Characteristic	**Limiting Concentration**
5-day biochemical oxygen demand	50 milligrams per liter
Total suspended solids	30 milligrams per liter
Total coliform group organisms	1,000 most probable number per 100 milliliters
Oil	Not to exceed a trace
Turbidity value	25

(c) **Monthly Reports.** All persons operating sewage, industrial waste or other waste disposal systems adjacent to or discharging to the water covered by this Regulation shall submit every month a report to the Minnesota Pollution Control Agency on the operation of such disposal system, the effluent flow, and the characteristics and concentration of the effluents and receiving waters. Sufficient data on measurements, observations, sampling

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and analyses and other pertinent information shall be furnished as may be required by the Agency to reflect adequately the condition of the disposal system, the effluent and the waters receiving the effluent.

(d) **Determination of Compliance.** In making tests or analyses of the sewage, industrial wastes or other wastes to determine compliance with the standards, samples shall be collected in such manner and place, and of such type, number and frequency as may be considered satisfactory by the Agency. No allowance will be made for dilution of the effluents in the waters of the state into which they are discharged. The samples shall be preserved and analyzed in accordance with procedures given in the Standard Methods for the Examination of Water and Waste-Water, by the American Public Health Association, American Water Works Association, and the Water Pollution Control Federation or other methods acceptable to the Agency.

(e) **Variance.** Where upon written application of the responsible person or persons and after public hearing the Agency finds that by reason of exceptional circumstances, strict conformity with any provision of these standards would cause undue hardship, would be unreasonable, impractical or not feasible under the circumstances, the Agency may by Order grant a variance from these standards to such person or persons upon such conditions and within such time limitations as it may prescribe for prevention, control or abatement of pollution in harmony with the intent of state and federal laws.

S.F. No. 2103

AN ACT

CHAPTER No.
831

relating to marine toilets and treatment devices on watercraft; amending Minnesota Statutes 1967, Section 361.29, Subdivision 4.

BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF MINNESOTA:

Section 1. Minnesota Statutes 1967, Section 361.29, Subdivision 4, is amended to read:

Subd. 4. Any treatment device designed for use with a marine toilet, if in good working condition and of a type acceptable to the water pollution control ~~commission~~ agency of the state of Minnesota, is presumed to comply with requirements of this section. In addition to the treatment devices which may be listed by the pollution control agency as being acceptable for use on watercraft licensed by the state of Minnesota, any other treatment device which has been formally accepted by another state or national agency for use on watercraft upon waters over which such other agency has jurisdiction for water pollution control purposes shall be considered acceptable by the pollution control agency of the state of Minnesota for use on watercraft which are lawfully exempt from licensing in Minnesota under the provisions of section 361.03, subdivision 12, while such watercraft are upon any internal or boundary waters of the state of Minnesota provided that such other treatment device must be in good working condition.

S.F. No. 2103

James B. Goetz
President of the Senate.

L. L. Duxbury
Speaker of the House of Representatives.

Passed the Senate this 13th day of May
in the year of Our Lord one thousand nine hundred and sixty-nine.

H. Y. Torrey
Secretary of the Senate.

Passed the House of Representatives this 23rd day of May
in the year of Our Lord one thousand nine hundred and sixty-nine.

Edward A Burdick
Edward A. Burdick
Chief Clerk, House of Representatives.

Approved May 27 1969

Harold LeVander
Harold LeVander
Governor of the State of Minnesota.

Filed May 28, 1969

Joseph L Donovan
Joseph L. Donovan
Secretary of State.

MINNESOTA POLLUTION CONTROL AGENCY
Division of Water Quality

Status of Municipalities in Upper Mississippi Enforcement Conference Area in Regard to Combined Sewer Separation Studies
(as of July 15, 1969)

Source	Combined Sewer System	Year Sanitary Sewer Construction	Year STP Constructed	Study on Sewer Separation in Progress	Engineering Report Received	Remarks
			MINNESOTA RIVER			
*New Ulm	Yes	1896	1940	Yes		
*Vernon Center	No	1948	1948		No	
Mankato	No	1891	1961	N. A.	N. A.	Status OK
North Mankato	No	1920	1961	N. A.	N. A.	Status OK
St. Peter	Yes	1921	1963	N. A.	N. A.	Status OK
LeSueur	No	1927	1963.	N. A.	Yes	
Henderson	No	1969	Vic.	N. A.	N. A.	Status OK
Belle Plaine	No	1916	1963	N. A.	N. A.	Status OK
Jordan	No	1919	1962	N. A.	N. A.	Status OK
Chaska	No	1917	1963	N. A.	N. A.	Status OK
Shakopee	Yes	1916	1961	N. A.	N. A.	Status OK
Savage	No	------	1963	No	No	No apparent Progress
Burnsville	No	1963	1964-1967	N. A.	N. A.	Status OK
Eagan Township	No	1967	1967	N. A.	N. A.	Status OK

Source	Combined Sewer System	Year Sanitary Sewer Construction	Year STP Construction	Study on Sewer Separation in Progress	Engineering Report Received	Remarks
			MISSISSIPPI RIVER			
*St. Cloud	Yes	1887	1956	Yes	No	
*Monticello	No	1924	1961	N. A.	N. A.	Status OK
*Elk River	No	1931	1960	N. A.	N. A.	Status OK
*Isanti	No	1926	1968	N. A.	N. A.	Status OK
Anoka	No	1917	1956 Under Construction	N. A.	N. A.	Status OK
Minneapolis	Yes	1872	Sewage to MSSD	Yes	Yes	A ten year sewage separation program is under way.
St. Paul	Yes	1982	Sewage to MSSD	Yes	Yes	Submit Phase I preliminary report.
South St. Paul	Yes	1919	1940-63 Under Construction	Yes	Yes	City plans to treat some storm water and sanitary sewage.
Newport	No	1963	1964	N. A.	N. A.	Status OK
Inver Grove Heights	No	1965	1965	N. A.	N. A.	Status OK
St. Paul Park	No	1954	1955-64	N. A.	N. A.	Status OK
Cottage Grove	No	1961	1962-69	N. A.	N. A.	Status OK
Hastings	No	1907	1956-68	N. A.	N. A.	Letter from city 12/6/68 reports no combined sewers.
Red Wing	Yes	1876	1961	Yes	No	City has employed consulting Engineer.
Lake City	No	1921	1934-66	N. A.	N. A.	Status OK

Source	Combined Sewer System	Year Sanitary Sewer Construction	Year STP Construction	Study on Sewer Separation in Progress	Engineering Report Received	Remarks
			ST. CROIX RIVER			
Taylors Falls	Undetermined	1923	1941	No	No	No apparent Progress
Still Water	Yes	1905	1960	Yes	No	An additional six months for submission of engineering report. granted.
Oak Park Heights	No	1967	1968	N. A.	N. A.	Status OK
Bayport	No	1920	1940-59-64	N. A.	N. A.	Status OK

N. A. - Not applicable
* Municipality is outside the conference area of primary concern.

"ATTACHMENT G"

MINNESOTA POLLUTION CONTROL AGENCY
Division of Solid Waste

Upper Mississippi River Enforcement Conference Area
Status of Solid Waste Disposal According to Recommendation 14

July 22, 1969

Site	Status Regarding Recommendation 14
Pigs Eye Landfill St. Paul Ramsey County Mississippi River Flood Plain	In compliance by covering
Fish Hatchery Landfill St. Paul, Ramsey County Mississippi River Flood Plain	In compliance by covering
South St. Paul Landfill South St. Paul, Dakota County Mississippi River Flood Plain	In compliance by covering and levee. All putrecibles excluded
North Mankato Sanitary Landfill North Mankato, Nicollet County Minnesota River Flood Plain	In compliance by covering and dike.
Weimert Dump Belgrade Twp., Nicollet County Minnesota River Flood Plain	Not in compliance. Should improve covering and diking.
St. Peter City Dump St. Peter, Nicollet County Minnesota River Flood Plain	In compliance by relocation away from flood plain.
Le Sueur City Dump Le Sueur, Le Sueur County Minnesota River Flood Plain	In compliance by relocation away from flood plain.
Henderson Village Dump Henderson, Sibley County Minnesota River Flood Plain	Not in compliance - Open dump. Should cover
Carver Village Dump Carver, Carver County Minnesota River Flood Plain	Not in compliance - open dump. Should cover
Chaska City Dump Chaska, Carver County Minnesota River Flood Plain	Not in compliance - should improve covering
Shakopee Pay Dump Shakopee, Scott County Minnesota River Flood Plain	Not in compliance - should improve covering.
Minnesota Valley Landfill Glendale Twp., Scott County Minnesota River Flood Plain	Not in compliance - should improve covering.

Site	Status Regarding Recommendation 14
Burnsville Sanitary Landfill (Kraemer Landfill) Burnsville, Dakota County Minnesota River Flood Plain	In compliance by covering.
Freeway Landfill Burnsville, Dakota County Minnesota River Flood Plain	Not in compliance - should improve covering.
Bayport Dump Baytown Township, Washington Co. Drainage to St. Croix River	Not in compliance - should divert drainage and improve covering.

MR. BADALICH: I believe, Mr. Chairman, this concludes the statement of the Agency and then in turn I do have a number of representatives from industries and municipalities who would like to make a statement.

MR. STEIN: Right.

Let's see if we have any comments or questions. Are there any?

MR. POSTON: I might have some comments here.

MR. STEIN: All right.

MR. POSTON: First I notice that you have concern about the standards, and I would like to say that I will do everything within my capabilities to push the paperwork along as fast as I can to get the standards adopted. However, this is a thing that the Secretary does, but I have assurance that things are in order to send to them at this time.

MR. BADALICH: All right, sir.

MR. POSTON: I wondered how your Agency is going to look at the water department's request for an extension of time on their pollution problem, the problem of disposal of their sludge wastes?

MR. BADALICH: Mr. Poston, I think the request will have to come from the water department first of all. How the Agency might act in this matter, I certainly can't second-guess them. They have proceeded insofar as providing the bonding necessary, but I believe actually getting started under the construction facilities and providing plans and specifications still remains to be offered to the Agency. I believe there might be--there is a letter attached to--I am sorry, there is not, but there may be a representative from the Minneapolis Water Department here later on that might want to make a statement.

MR. POSTON: I am a little disturbed every time I see one of our research demonstration grants get itself in a position that we are holding up and waiting and can't proceed until we get the results of these research demonstration projects. It seems to me that we should be able to get available information from these at a much earlier time. We do have ways and means of handling wastes that are very well understood. This is of concern to me because I see this happen more than once.

MR. BADALICH: Is there any specific reference to anyone, Mr. Poston, or is this in general?

MR. POSTON: Well, this is in general, but I note that the results are not going to be ready for some time and I wondered whether there is any way that we could step this up.

Well, this pertains to Red Wing or the--

MR. STEIN: Tanning company, isn't it?

MR. POSTON: --the tanning company.

MR. BADALICH: Yes, Mr. Poston, there is a letter attached to my statement here from Mr. Christensen, Project Director for the S. B. Foot Tanning Company. I think he pretty well reiterates what their position is at the present time.

MR. POSTON: Also on page 4, the MSSD has a research study on the use of interceptors for storage. There was reference to progress is being hampered because these studies must take into account the results of their studies, that is St. Paul Sanitary District?

MR. BADALICH: Yes, Mr. Poston, this is reference to the combined sewer study, one of the recommendations requiring St. Paul and Minneapolis to make an evaluation of this. I believe there is a long deadline of about ten years, to about 1977, I believe, for compliance, but there is an implementation plan or a schedule set forth that they have to have their plans available by June of this year. But being that the Minneapolis-St. Paul Sanitary District did have this research and demonstration grant with the computer control of the interceptor outfalls, this has delayed this study until there can be some operational data gathered on the function and the operation of these facilities. I believe possibly Mr. Robins will elaborate on this a little later.

MR. STEIN: I have a comment and perhaps a question.

A question that was asked before was why isn't the river better than it is. In summary what you do say is, "only sixteen significant sources to be reduced, or put in another way, seventy-one percent of the sources originally listed have either made sufficient improvement in their treatment in the past year to become satisfactory, or do not discharge wastes of any significance to interstate waters."

The question is, if this is the case when they came in, why in the world isn't it any better? I think you didn't need to imply that some of those sixteen sources or less than thirty percent weren't pretty big ones, because we have Minneapolis-St. Paul Sanitary District, Swift and Company, Armour, South St. Paul, American Crystal Sugar, Stillwater, for example. So I think as long as we have significant large sources going into the river you are not going to expect a spectacular waste treatment.

Although I do think that the report you have given indicates a very active State agency in full-fledged pursuit of a cleanup of an enforcement program. I think your report is excellent.

There is one question I have, and this was based on--

MR. BADALICH: Mr. Stein, before you go any further, I believe representatives of some of these sources will be here to explain their program in more detail, and I think this will probably be clarified further on what they are doing. As far as we are concerned, everybody is in some sort of an implementation or compliance schedule.

MR. STEIN: Right.

MR. BADALICH: It is just that we have had the construction facilities and other things going on, some beyond our control, but they are proceeding in a very set manner.

MR. STEIN: We recognize that and I think this is the thing that we have to recognize in any particular case--that people with the smaller jobs can get through more readily than the people with the big jobs. First of all, the construction isn't as great. Generally it is not as complex.

But I have one question on the basis of staff reports we have seen. You said except for the ones you listed the others are in compliance. Now, I have specific reference to the 3 M's, Minnesota Mining and Manufacturing. The point is they are not listed as being out of compliance and the question I have, did they submit their preliminary plans within six to twelve months and did they submit the final design for remedial facilities between twelve to twenty-four months as required by the last conference recommendation?

MR. BADALICH: Yes, they did. The reason they are not in compliance is because, as you probably know, we also have adopted State regulations that we referred to as WPC 18 through 21. But the requirements under our State regulations are more stringent in most cases, so they are in conformance to the Federal-State enforcement conferees' recommendations, but not, as we see it yet, according to our State regulations.

MR. STEIN: Are there any other comments or questions?

MR. GADLER: I would like to ask a question.

MR. STEIN: Yes.

MR. GADLER: Do you have all the new sources that are dumping pollution in the river listed or are they available to you?

MR. BADALICH: I believe they are, Mr. Gadler, and I would like the choice of the word "discharge" instead of "dumping."

MR. GADLER: Well, that is my prerogative, I think, to use the term I desire.

The other point that I have, question that I have to ask is, why doesn't the Hudson Manufacturing Company of Hastings turn in reports?

MR. BADALICH: I think, Mr. Gadler, you are well aware of this, I believe, in our reports to the Federal Government under our program grant application, this is a long tedious process of trying to get the discharger to conform to this requirement. It is just a matter of staying on top of it and we are trying to do the best we can. I think you realize, Mr. Gadler, that our effort has increased tremendously in this, and I believe in the next report you will see in the program plan that we have expanded on this and I think our percentage of compliance has been greatly enhanced because of our insistence of doing this.

Specific to the Hudson company, I myself do not know what the holdup might be, but I am sure that our enforcement officer will keep going after them and we hope that we can have compliance in very short order.

MR. GADLER: Is it compliance or is it compliance with submitting a report?

MR. BADALICH: It is compliance with

submitting a report. Basically that is what this recommendation refers to, and they have been very reluctant and I suppose very lax in submitting this.

MR. GADLER: We don't know, then, whether they are in compliance with the regulations?

MR. BADALICH: On that I cannot answer either. I suspect that they would be.

MR. TUVESON: We will comment on that later.

MR. BADALICH: We will comment on that later.

MR. STEIN: Are there any other comments or questions?

MR. POSTON: I might talk about your recommendation number 13 on page 5 pertaining to boats. And I would say that the National Sanitation Foundation is a study agency and it is my understanding that the recommendations on sewage treatment devices covered an evaluation of the various kinds of treatment that might be expected from these installations.

The States around Lake Michigan, for example, came up with a recommendation for control of wastes from watercraft and they determined that it was best to provide holding tanks, incineration or equivalent, and that overboard discharge of wastes was not acceptable. And in light of the fact that Wisconsin has this standard, I think that I wouldn't want to be a party to reducing the effectiveness or reducing our pollution control by approving a macerator/chlorinator type device which from all the information that I have been able to find is not as satisfactory a device for waste disposal from watercraft.

MR. STEIN: Do you want to answer that now?

MR. BADALICH: Well, Mr. Poston, we feel that the National Sanitation Foundation is a very credible institution and they are certainly supported by Federal funds, and so on, and we believe that they have the expertise necessary to tell us this. We haven't got the research facilities to go into every type of device that is on the market. We rely on these people and I believe that their criteria they set forth are acceptable to our agency.

Up until the time it is proven differently and that we can actually compel holding devices on all of our marinas, this will have to be done through legislation. I think this is a very adequate system at the present time.

MR. STEIN: Let me--

MR. WISNIEWSKI: Mr. Chairman.

MR. STEIN: Yes.

MR. WISNIEWSKI: In connection with criteria established by the National Sanitation Foundation, it is my understanding that the National Sanitation Foundation established criteria for the evaluation of macerator/chlorinator devices. They did not establish criteria for devices nor did they approve any devices. All they did was set standards for the evaluation of them.

MR. BADALICH: Yes. And based on that evaluation, Mr. Wisniewski, we felt that they certainly meet our criteria.

MR. WISNIEWSKI: But they didn't approve any.

MR. BADALICH: I agree with you there, yes. It is just a recommendation on their part.

MR. WISNIEWSKI: No, they made a

recommendation strictly as to how you are going to study and examine these things. They did not make a recommendation on the devices themselves.

MR. STEIN: May I make a suggestion here? I was afraid we would get into this. We are about at lunchtime. I think this is the one position or one area--also Minnesota has made a pretty strong recommendation--the one area where in principle or philosophically I can sense that we may have a little difference of opinion among the conferees.

Now, whether we want to meet this or not, I would suggest we can resume after lunch. But I suggest you may want to get together with the other conferees and see how far we want to pursue this and how productive it will be for the conferees to adopt a position on this. I am ready to go any way any of the conferees would make a judgment on this because this is why we are here. But I would think we should consider this during the lunch period and come back then and decide how and in what manner we want to pursue it.

And with that, as previously--

MR. BADALICH: Mr. Stein, there is another important point in this recommendation and that is the fact that we have no jurisdiction over federally licensed or documented boats. And I think there is a very important point to be brought up, too--that we ourselves regulate our own users and Wisconsin does also, but federally documented vessels are exempt. And I think this should also be ironed out and some recommendation made in this regard.

MR. STEIN: Right. Let me go off the record now. We are on our lunchtime.

(Off the record.)

MR. STEIN: Let's recess for lunch until 2 o'clock.

(NOON RECESS)

AFTERNOON SESSION

(2 o'clock p.m.)

MR. STEIN: Let's reconvene.

MINNESOTA PRESENTATION (CONTINUED)

MR. BADALICH: Mr. Chairman, I think at the close of the morning session you made a statement about the State of Minnesota getting in the field of radioactivity and sort of surpassing the Federal authority on that and also talked about what we are doing in the area of boat heads.

The only way I guess I can answer that is the fact that in our statutes it indicates that radioactivity is probably one of our charges through the definition of wastes in our statutes. And also I think Mr. Don Marshall brought it out this morning that there is concern about radioactivity in the public health standards which we have adopted by reference and they are clearly part of our interstate water quality standards. Whereas, in the State statutes, the governor operation of our Agency, it very clearly indicates that we have no authority over federally documented and licensed boats and also foreign vessels. So maybe that is the only answer I can give in rebuttal as to why we are more concerned in radioactivity and probably fighting the Federal Government on this than we are in boat heads, because we feel under our statutory authority we do not have the authority in one that we do have in the other.

MR. STEIN: I am not sure you are fighting the Federal Government at all.

MR. BADALICH: We are not fighting you. We are in agreement with you at all times, at least try to make out a public agreement.

MR. STEIN: At least publicly we are always in agreement.

MR. BADALICH: Absolutely.

Mr. Stein, to continue with Minnesota's participation in this reconvening of this important conference, I would like to call on the respective agencies that want to make a statement.

MR. STEIN: Just a moment. I believe we may have some more questions.

MR. BADALICH: All right.

MR. STEIN: Mr. Poston.

MR. POSTON: I would like to clarify one point that was brought out that the Minnesota Agency extended the time for compliance and extended three in particular, South St. Paul, Mankato, and American Crystal Sugar Company, and I would like to ask whether or not these agreements to extend the time were made subject to the concurrence by the conferees. I think this is a point, that if we can have other agencies extending the time before they are going to meet with us that there would be a question of who does set the time schedules, what is going to be permitted with respect to the conferees' determinations and conclusions.

I guess my specific question is, then, was this given subject to the concurrence of the conferees?

MR. BADALICH: Mr. Chairman.

If I may answer that in part, Mr. Poston, under our interstate water quality standards we do have the standard as such and also the compliance implementation plan and there we did indicate in some of the policy provisions of our standards that at any time that the Agency did grant a variance, whether to the standard or whether to the compliance schedule, and so on, that the FWPCA would be informed of this particular action, and we have thus provided this information. And I would concur with you that possibly this should be discussed by the conferees, although the State did act under their own statutory authority to grant this variance and we felt it was justified after a public hearing. And I believe following my presentation, when I do call upon these particular dischargers, that they will certainly bring up their reasons for this as a matter of information to the conferees.

MR. POSTON: I had one other question with regard to South St. Paul. I understand that they are going to bypass raw or partially treated sewage for a period of time. This is continually a problem, as I see it, around in various places. When they build a new waste treatment works they like to stop the operation of the old one and jump into full construction activity and bypass the existing plant. We have been very adamant in trying to get schedules or a proviso in the construction contract and specifications that there would be no bypassing at the time of construction of new facilities.

I wondered if this was considered at the time it was decided that South St. Paul would bypass raw or partially treated sewage?

MR. BADALICH: Mr. Poston, I believe it was in the construction plans that were submitted to the Agency, but I will leave this up to them to answer this. This is due to their construction of their new and expanded facilities whereby they are constructing new primary grit chambers, and the bypass will be of peak flows during some periods of the day and I believe that Mr. Peterson or Mr. Larson will elaborate on this a little bit more.

MR. POSTON: And one final comment. I think you are to be commended for a very complete report this time. It covers the whole range of problems very well.

MR. BADALICH: Thank you, sir.

MR. STEIN: Are there any further comments or questions?

MR. BADALICH: Mr. Stein, if I may continue now, I would like to call upon the people that have indicated they would like to make a presentation, and I would like to start off with probably now the biggest discharger in the metropolitan area and that is the Metropolitan Council. I believe they will be represented by Mr. Frank Lamm, their Environmental Engineer. As you probably know, under legislation the Sewer Board was just established here several weeks ago, and we hope to develop a very good rapport with them.

So may I call upon Mr. Lamm at this particular time.

STATEMENT BY FRANK LAMM
ENVIRONMENTAL ENGINEER
METROPOLITAN COUNCIL
ST. PAUL, MINNESOTA

MR. LAMM: Thank you, I think, Mr. Badalich. (Laughter.)

Mr. Chairman, conferees. My name is Frank Lamm. I am on the staff of the Metropolitan Council. I have been asked to make a brief statement today relative to the Metropolitan Council's responsibility in this matter.

Before I make the official statement, let me clarify one point. We are not now the biggest polluters. (Laughter.)

MR. BADALICH: I said discharger.

MR. LAMM: Or discharger.

MR. GADLER: Discharger or dumper.

MR. LAMM: Or dumper. (Laughter.)

The Metropolitan Council thanks the Minnesota Pollution Control Agency for the opportunity to participate in this progress evaluation meeting on the matter of the Conference on the Pollution of the Interstate Waters of the Upper Mississippi River and Tributaries. It is well to review the current role of the Council on pollution control concerning that portion of conference waters which is within the metropolitan area.

The Metropolitan Council was created by the 1967 session of the Minnesota Legislature to "coordinate planning and development of the metropolitan area comprising the counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott and Washington." This entire area lies within the Upper Mississippi River Basin.

To achieve these planning and development objectives, the Council was given certain responsibilities in its law and through Federal regulations relating to metropolitan planning and local grants-in-aid. On the subject of use of the rivers for sewage dilution and setting of standards for pollution abatement the Council was charged specifically to engage in a continuous program of research and study concerning the control and prevention of water pollution in the metropolitan area in conformity with applicable Federal and State laws.

In the 1969 session of the State legislature, the Council was given the further responsibility of creating a Metropolitan Sewer Service Board which, together with the Council,"can take over, acquire, construct, operate, and maintain all interceptors and treatment works necessary for the collection, treatment, and disposal of sewage in the metropolitan area."

The Metropolitan Council has recently appointed the seven-man Metropolitan Sewer Service Board. It is expected that the board will be organized and will initiate its duties within the next three weeks.

Specifically, the board's enacting legislation requires it to take over all sanitary districts and joint sewer boards during calendar year 1970. Also, at any time after January 1, 1970, the board is to assume ownership of all existing interceptors and treatment works which will be needed to implement the Council's comprehensive sewerage plan, and to acquire, construct, equip, operate and maintain all additional interceptors and treatment works which will be needed for such purpose.

These far-reaching requirements mean that the Metropolitan Sewer Service Board will eventually assume ownership and will operate many of the pollution control facilities under discussion today. The Metropolitan Council would, therefore, like to take this opportunity to state its intentions of cooperating with the Federal Water Pollution Control Administration, the Minnesota Pollution Control Agency and other responsible Federal, State and local agencies in the preservation, and where feasible and desirable, the upgrading of interstate waters within the metropolitan area.

MR. STEIN: Thank you, Mr. Lamm.

Are there any comments or questions?

If not, let me ask you one. This is particularly important in view of your potential power and authority.

The last sentence on page 1 of your statement on the "...use of the rivers for sewage dilution and setting of standards for pollution abatement the Council was charged specifically to engage in a continuous program of research and study..."

What do you mean by that sewage dilution business?

MR. LAMM: Fortunately, that is within the previous statements that have been presented. Speaking as an individual, and I can't speak for the sewer board now because it hasn't been in operation, I seriously question the use of rivers for sewage dilution per se. In that I mean that I think that the primary objective should be adequate treatment and then discharge of this adequately treated effluent into the receiving stream. I don't want to give the impression here that the Metropolitan Council condones dilution as the solution to pollution because I don't feel that way personally and I don't feel the Council does either.

MR. STEIN: I hope not, because if you are going to cooperate with the Federal Water Pollution Control Administration, anyone who approaches the notion of using rivers for sewage dilution is going to have a hard time cooperating with us.

MR. LAMM: Yes, I agree. And as I say, this is sort of an unfortunate wording that had previously been written into this.

MR. GADLER: Mr. Chairman.

MR. STEIN: Yes.

MR. GADLER: In the last two sentences on page 2 it says, "and where feasible and desirable." You don't imply that it is not feasible and desirable to upgrade interstate waters?

MR. LAMM: Oh, sure, we can upgrade them from their present condition to a new condition, but we can't continually upgrade. We are going to reach a point where we are meeting the standards, let's say, or even exceeding the standards. But right now there is no intention to clean up all stretches of all interstate rivers to the exact same degree, at least there are no standards that I know of right here.

So what I mean is to meet the standards that are set by the PCA and where it is feasible and desirable this means upgrading the existing conditions of the interstate waters to meet these standards.

MR. STEIN: Let me go on that, then. As long as you are starting, let's understand each other. I don't have any trouble with feasible and desirable, but I don't know that we ever stop with this upgrading. You know, this business of when you get to the moon maybe you stop before and you don't have to go to Mars.

Now, again, and I would like to use this example of the radiation operation. We dealt with radiation in some rivers, specifically the Colorado River, where they had Public Health Service water quality standards for radium, for example, of three microcuries or what they call micro microcuries or what they call now picocuries. They always change the terminology on that, but the number is important. Three was sufficient for a water intake. And everyone wanted to stop there and we indicated that you could go further and we did go further and now we have got it down to one part, one picocurie in the Colorado River water on radiation, which is much better than the water quality standards.

Our charge, at least in the Federal law, is to enhance water quality. With your agency starting out I don't want you to get any notion, because this is not the Federal program and not our notion, that once you meet the standards you can rest your oars and you don't have to go any farther. Because I think our job is to enhance the water quality, and I will use your phrase here, where feasible and desirable, to make that water as clean as we possibly can for the maximum number of uses and give us enough safeguards.

MR. LAMM: Mr. Chairman, we are in agreement with that particular statement and I don't think that the sentence as left in here leaves any other interpretation.

MR. STEIN: Any other comments or questions?

If not, thank you very much.

MR. LAMM: Thank you.

MR. STEIN: Mr. Badalich.

MR. BADALICH: Mr. Chairman, I would like to next call upon the city of Minneapolis. Is there anybody here from Minneapolis?

If not, Mr. Chairman, I do have two attachments that were presented to the conferees by the city of Minneapolis, one under date of July 17, 1969, from Mr. Clayton Sorenson, and also a sewer separation status report by Milton Christensen I would like to have entered into the record.

MR. STEIN: May I see them?

MR. BADALICH: Yes, you have those.

MR. STEIN: Without objection, these will be entered into the record as if read.

(Which attachments are as follows:)

Reproduced from best available copy.

City of Minneapolis

DEPARTMENT OF PUBLIC WORKS
CLAYTON A. SORENSON, P.E.
CITY ENGINEER — DIRECTOR
MINNEAPOLIS, MINNESOTA 55415

T. B. CORLETT, DIRECTOR, WATER WORKS
W. G. RIDGE, DIRECTOR, OPERATIONS
E. A. BABCOCK, DIRECTOR, GENERAL SERVICES
M. E. ENQUIST, DIRECTOR, STREETS & SANITATION
P. D. SMITH, DIRECTOR, ENGRG. DESIGN
R. H. SPRUNGMAN, DIRECTOR, TRAFFIC ENGRG.

July 17, 1969

RECEIVED
JUL 21 1969
MINN. POLLUTION
CONTROL AGENCY

Minnesota Pollution Control Agency
717 Delaware Street Southeast
Minneapolis, Minnesota 55440

Attention: Mr. John Badalich, P.E.
Executive Secretary & Chief Executive Officer

Gentlemen:

The City of Minneapolis has reviewed your Information Release dated July 10, 1969 regarding the progress evaluation meeting on pollution control of the Upper Mississippi River and reports the following progress.

The City of Minneapolis was directed in a letter from the Minnesota Pollution Control Agency dated August 28, 1967 to undertake a Remedial Program for pollution abatement in the City of Minneapolis. The City reviewed the obligations and recommended measures as set forth in the letter of August 28, 1967 and found no objections to them. On December 21, 1967 the City submitted a letter and report to the Pollution Control Agency indicating their willingness and ability to comply to the recommendations. A report of sewer separation in Minneapolis with a proposed 10-year program has been submitted to the Pollution Control Agency.

The City has continued an aggressive program of planning and construction of separate storm sewer systems with expenditures of $2,484,485.09 in 1967, $3,135,439.32 in 1968, an anticipated expenditures of $2,635,000.00 in 1969 and $3,660,000.00 scheduled for 1970, in addition to other agency work estimated at $600,000.00 for each of the years of 1969 and 1970.

A HUD grant WS-Minn.-84 was approved for $1,386,000.00 for 1968 and an application is now on file for $777,367.50 for 1969.

Separation has now been accomplished in about 75% of the sewer system, with plans and programs being developed for complete separation by 1977 at an estimated cost of $21,000,000.00.

Very truly yours,

Clayton A. Sorenson

Clayton A. Sorenson, P.E.
Director of Public Works

CAS/WGR/lfi

RECEIVED

City of Minneapolis

DEPARTMENT OF PUBLIC WORKS
CLAYTON A. SORENSON, P.E.
CITY ENGINEER — DIRECTOR
MINNEAPOLIS, MINNESOTA 55415

July 1[illegible] 1969

John P. Badalich, P.E.
State of Minnesota
Pollution Control Agency
717 Delaware Street S.E.
Minneapolis, Minnesota 55440

Re: Sewer Separation Status

Dear Sir:

Enclosed is a sheet giving the current status of our sewer separation for the 2nd Quarter of 1969, extending through June 28, 1969.

Very truly yours,

Clayton A. Sorenson
Director of Public Works

By Milton R. Christensen
Milton R. Christensen
Sewer Planning Engineer

CAS/MRC/mf

Enclosure

Reproduced from best available copy.

CITY OF MINNEAPOLIS

Sewer Separation Report - 2nd Quarter, 1969
(to June 28, 1969)

SU No.	Description	Estimated Cost	Total Accumulated Cost	Percentage Completed
88	5th St. N.E.(31st-35th Ave. N.E.)	$ 235,000.	$ 242,022.17	97%
208	W. 22nd St.(Aldrich-Blaisdell Aves.)	328,257.84	44,589.12	20%
228	Central - New Brighton Road Broadway - 33rd Ave. N.E.	525,000.	230,014.63	50%
230	3rd Ave. N.E.(Miss.River-Jackson)	765,170.	454,252.56	65%
231	36th Ave. N. to 41st Ave. N.,Lyndale-River)	255,015.72	203,006.56	98%
279	E. 25th St. (2nd Ave. - 4th Ave. So.) E. 22nd St. (Stevens - 4th Ave. So.)	80,005.80	70,669.54	95%
312	Kennedy St. N.E. (Stinson Blvd.-Hoover)	80,013.00	63,865.00	100%
229	1st Ave. N.E. - E. Hennepin	199,903.80	52,932.07	55%
	Renewal - St. Anthony East	827,000.	130,000.00	20%
323	Fulton Residential Paving Area	100,000.	10,000.00	20%
321	Keewaydin Residential Paving Area	175,000.	35,000.00	70%
355	Fuller Residential Paving Area	60,000.	45,000.00	70%
	Industrial - Pacific St. Area	65,000.	38,500.00	99%
356	18th Ave. N.E. (Central - Monroe)	20,000.	19,512.00	100%
322	Victory South Res. Paving Area	175,000.	15,000.00	5%
	Renewal - Near North Side	766,000.	233,859.00	30%
		4,656,366.16	1,888,222.65	

MR. BADALICH: Next I would like to call upon the city of St. Paul. I have a statement here from the St. Paul Water Department, but does Mr. Hurtley from the city of St. Paul want to make a statement at this time?

MR. SCHNARR: Mr. Badalich, I want to make a statement.

MR. BADALICH: Oh, I am sorry, Mr. Schnarr, the City Engineer, is here to make a statement for the city of St. Paul.

STATEMENT OF RICHARD SCHNARR
CHIEF ENGINEER
ST. PAUL, MINNESOTA

MR. SCHNARR: Mr. Chairman and conferees, ladies and gentlemen.

My name is Richard Schnarr. I am Chief Engineer of the Public Works Department for the city of St. Paul and I would like to present a progress report for the city of St. Paul to the conferees on pollution of interstate waters.

(Which said statement is as follows:)

CITY OF SAINT PAUL
PROGRESS REPORT
to the
CONFERENCE ON POLLUTION OF INTERSTATE WATERS
of the
UPPER MISSISSIPPI RIVER AND TRIBUTARIES

Holiday Inn Central
Minneapolis, Minn.
July 22, 1969

By
Richard A. Schnarr
St. Paul City Engineer

As the representative of the City of Saint Paul, I am very appreciative of the opportunity to present a statement to you regarding Saint Paul's progress in water pollution abatement and to share with you some thoughts that we have regarding the general problem of water pollution.

While, as Mr. Avery stated on behalf of the City of Saint Paul on April 30, 1968, we in Saint Paul are in favor of clean rivers and pollution abatement and to that end have, over a period of time, spent millions of dollars to reduce pollution, and most of this before the current orders and directives from the state and federal regulatory bodies were issued, I believe it is time for all of us to take a good look at the regulations and standards if such regulations and standards are such as to require collected waste or sewage, regardless of their source, to meet higher requirements than the normal quality of rainwater runoff from fields, pastures, and similar areas. I am sure that we, as taxpayers in the State of Minnesota, are not interested in spending tax money, whatever the source of such tax money, for development or construction for pollution abatement which does not result in a reasonable reduction in pollution of our rivers and lakes.

In order to bring this report into focus for all in attendance, I will quickly summarize our situation in Saint Paul.

About September 1, 1967, we received a letter from the Minnesota Pollution Control Agency outlining measures which would, in the opinion of the Agency staff, ensure that the objectives of the Conference would be met in full. The areas of concern were the open dump within the flood plain of the Mississippi River and the discharge into the Mississippi River of certain storm sewer or combined storm and sanitary sewer outfalls which did not conform to the effluent standard set out in the requirements. The recommended measures for compliance were as follows:

1. Make an engineering study of combined sewers and develop methods eliminating them and/or developing effective means of controlling the discharge of sewage to the Mississippi River from this source in conformance with the standards.

2. Construct no more combined sewers and where possible eliminate such existing sewers.
3. Monitor and control the outfalls of existing combined sewers so that a maximum amount of combined sewage and storm water is conveyed to the disposal plant.
4. Operate a sanitary land fill in accordance with the standards.
5. Report to the Minnesota Pollution Control Agency at regular intervals and at such special times as required.

In connection with the directives received from the Minnesota Pollution Control Agency, the City of Saint Paul has engaged two consulting engineering firms to assist in the engineering study.

Greeley and Hansen, Engineers, of Chicago, Illinois, were engaged to perform a study of the administrative, operational, and financial aspects of the pollution control activities, relating to both our existing and future sewerage systems. The intent of the Phase I report of Greeley-Hansen was to study current methods of administration, financing, and operation of the Saint Paul sewerage system and to outline and give direction to what will be included in Phase II of the report which includes recommendations for future operation. The Minnesota Legislature in session earlier this year passed legislation which will affect the financing, operation, and administration of all such systems; and, since the provisions of the legislation present many uncertainties as to financing and administration by the City in future operations, the Greeley-Hansen report has had to be delayed; and it now appears that the Phase I report will be completed in September of this year.

Horner & Shifrin, Inc., of Saint Louis, Missouri, were engaged to study the controlling of sanitary sewage discharge into the Mississippi River; and they have completed their study of sewer separation Phase I, a copy of which was submitted to the Minnesota Pollution Control Agency for review and comment on September23, 1968. One of the comments received from the Minnesota Pollution Control Agency was that the Phase II studies should be closely coordinated with the Sewage Regulator Demonstration Project of the Minneapolis-Saint Paul Sanitary District, which will be reported on briefly by Mr. Robins, Chief Engineer of the Sanitary District.

The preliminary results of this program are very promising and point up the wisdom of close coordination between the Horner-Shifrin Phase II studies and the Sanitary District Demonstration Program. Preliminary results indicate that the regulator program may reduce the sanitary sewage spillage into the river by 75% and by increasing the scope of the program, it may very well be that the amount of pollution from combined sewage overflow could be insignificant. As a result, the Saint Paul City Council, by resolution, has requested an extension of time for the study report with improvement proposals from March 17, 1969, to March 17, 1970. A copy of the resolution is attached to this statement, and the request for extension of time as indicated is hereby restated to this Conference.

In connection with the solid waste disposal in St. Paul, we have revised our disposal method and are now operating a sanitary land fill in reasonable compliance with the standards. This operation does still need some reorganizing and closer supervision by our supervisory personnel, particularly in the winter and spring when conditions for this type operation are difficult at best. Solid waste disposal will ultimately be controlled by the Metropolitan Council through the county governments in the seven county area in accordance with legislation passed at the last legislative session.

Much of our combined sewer system in Saint Paul is inadequate for the increased sewage and runoff now being directed into it. This lack of capacity causes sewage backups into the basements of buildings connected to it. In 1967 the Public Works Department made a study and report of this situation and concluded that an estimated $40,000,000 relief sewer program would be required to correct the problem. From 1967 through 1969 the City of Saint Paul has programmed 65 relief sewer projects at a cost of $8,988,000. Of these projects 37 are for completely separate storm systems with outlets to the Mississippi, lakes, or existing storm trunk sewers, and the other 28 projects are constructed as separate storm sewers which outlet into existing combined sewer trunk lines. It is anticipated that in the future we will proceed with this program at the rate of two to three million dollars of construction a year. The sewer projects mentioned above do not include the small local improvement projects that are done each year. All extensions of existing sewers are constructed as separate sewers.

The construction of these relief sewers must be our first concern since this represents an immediate health hazard to our people in St. Paul due to sewer backups in basements.

While we have, we feel, made considerable progress in the never ending battle against pollution, we are greatly concerned about the ever increasing costs to accomplish the work required.

At the present time, it appears that our program will result in a combination of methods which will probably include separation of storm and sanitary sewers where practical; regulation of outfalls at the river to reduce the overflow to the river from combined sewers by manual and computor controlled methods; and storage, reduction of solids, and disinfection of overflows of combined sewers when overflowing is necessary.

Approved by the City Council
of Saint Paul July 18, 1969.

MR. SCHNARR: Thank you.

MR. STEIN: Thank you.

Are there any comments or questions?

By the way, do you want that resolution in the record too?

MR. SCHNARR: Yes.

MR. STEIN: Without objection, that will be done.

(Which said resolution is as follows:)

ORIGINAL TO CITY CLERK

242168

CITY OF ST. PAUL
OFFICE OF THE CITY CLERK
COUNCIL RESOLUTION—GENERAL FORM

COUNCIL FILE NO. ____________

213-A

PRESENTED BY COMMISSIONER Dalglish by request DATE ____________

WHEREAS, a Federal-State Conference on Pollution of the Upper Mississippi River was held in Minneapolis in February and March, 1967, and

WHEREAS subsequent to said conference the City of Saint Paul did not receive from the Minnesota Pollution Control Agency until August 31, 1967, a notice of certain sewer system effluent standards and a directive to complete certain sewer system studies by March 17, 1969, and

WHEREAS, on September 23, 1968, the City of Saint Paul transmitted to the Minnesota Pollution Control Agency for review and further direction a preliminary engineering report proposing methods and concepts to accomplish a higher degree of control over the discharge of sewer system effluent to the Mississippi River, and

WHEREAS review and approval of said preliminary engineering report is necessary before St. Paul can proceed with more detailed planning, and

WHEREAS, the Minnesota Pollution Control Agency has not as of February 11, 1969, responded with the said necessary review and further direction concerning said preliminary engineering report, and

WHEREAS conclusions of both the City of Saint Paul and the Minnesota Pollution Control Agency with respect to the extent and character of necessary sewer system changes in Saint Paul should properly await the results of a federally-funded research and demonstration project now being conducted by the Minneapolis-St. Paul Sanitary District, and

WHEREAS an appraisal of results from said research and demonstration project will be available during the latter part of 1969,

NOW, THEREFORE, BE IT RESOLVED That the City Council hereby request the Minnesota Pollution Control Agency to extend the time for completion of the study report with improvement proposals by the City from March 17, 1969, to March 17, 1970, and

BE IT FURTHER RESOLVED That the City Clerk transmit a copy of this resolution to Mr. John P. Badalich, Director, Minnesota Pollution Control Agency.

WJA

COUNCILMEN
Yeas Nays
Carlson
Dalglish
~~Holland~~
Meredith
Peterson
Tedesco Sprafka
Mr. President, Byrne

6 In Favor

0 Against

Adopted by the Council FEB 14 1969 19__

Approved FEB 14 1969 19__

Thomas R. Byrne
Mayor

PUBLISHED FEB 21 1969

MR. STEIN: Any other comments or questions?

Let me start you off. You had a storm-water overflow program, 65 relief sewers which are backing up into the basements, about 37 completely separate, 28 constructed as separate storm sewers which outlet into existing combined sewer trunk lines. In other words, you took 40 percent of that problem and you transferred it from the basement to the river, right?

MR. SCHNARR: Not necessarily to the river. I couldn't say for sure--

MR. STEIN: Well, where do those combined sewer trunk lines run?

MR. SCHNARR: Some of them run to the

sanitary district, I presume all of them do.

MR. STEIN: Combined sewers? What happens when it rains? You are not getting a problem in the basement when it doesn't back up and rain. When it rains and you get this business, they are bypassing and they are going to the river.

MR. SCHNARR: If the trunk is not causing any problem, then there is no overflow. The problems that we have on backup are generally the sewers in the streets near the residential areas.

MR. STEIN: I understand that. How many of your trunks of those 28 projects when it rains don't bypass that sewage treatment plant?

MR. SCHNARR: I don't know that there are 28 trunks that we are talking about. It is 28 projects.

MR. STEIN: Twenty-eight projects. But how many of those 28 projects, or 40 percent of what you relieve in the basements--I thoroughly agree you should relieve those basements because I have a basement too, but how much of that 40 percent of what you relieve in the basements doesn't hit that river untreated?

MR. SCHNARR: I couldn't give you any specifics. I would presume that our sewer engineer and our sewer department have gone through this and eliminated the problems where they could. It may be that some of these do overflow into the river at the present time.

MR. STEIN: Well, I am just saying on the face of it--it looks like you have handled a very difficult problem. But on the face of it it looks like you have taken 100 percent out of the basements and you have transferred--without any further statement, and there may be something further--40 percent of that to the river. And I am not sure we can consider that a satisfactory ultimate solution.

MR. SCHNARR: The presumption that this goes into the river is not necessarily a true presumption. The control--

MR. STEIN: Where does it go, then?

MR. SCHNARR: The computer programming control on these things has made a very definite change in the amount of flow into the river on storms. As a matter of fact, the indication is that it has reduced it by 75 percent. This is a very preliminary--

MR. STEIN: We are talking about that stuff that was backed into the basement. When something goes into a storm sewer, either it goes into a treatment plant or goes into the river untreated. Where else can it go? Now, you know what goes into your treatment plant. If it doesn't go there, it has to go into the river untreated, doesn't it?

MR. SCHNARR: But from your presuming that all 28 of these will go directly into the river, that is wrong. It may be that some of them do. As I stated in the report, it is necessary that we take care of first things first, and I believe flooded basements come before the concern for the river. Not that we don't have concern for the river, but there are only so many dollars and certainly we have to take care of first things first.

MR. STEIN: We would all agree with that. But presumably if you take the stuff out of the basement you should know where it goes as your alternative.

MR. SCHNARR: Yes, it goes into our

combined trunk sewers on 28 projects.

MR. STEIN: Where does that go?

MR. SCHNARR: This goes down to the sanitary district and only overflows when the capacity of the sewers is overtaxed as far as the trunk is concerned.

MR. STEIN: That is what happens with all combined sewers. There is no magic about that. But they wouldn't be going into the basement unless you had a big rain.

MR. SCHNARR: But it isn't necessarily the trunk that is backing it up when we get it into the basements. It may be just the lateral sewer, it may be just the sewer itself in the street. It isn't necessarily the trunk sewer that is backing it up.

MR. STEIN: Well, I--

MR. SCHNARR: We are working toward the elimination of all of these problems, but as I state in the report, I think that it is essential that we take care of our homes in St. Paul and stop the backup in the basements. This is the primary concern at the present time.

MR. STEIN: Let me put this question

another way. Do you have any program that these other 28 projects that are not in separate sewers and are going into combined sewers will not reach the river untreated? Do you have any program?

MR. SCHNARR: In the last paragraph we indicate:

"At the present time, it appears that our program will result in a combination of methods which will probably include separation of storm and sanitary sewers where practical; regulation of outfalls at the river to reduce the overflow to the river from combined sewers by manual and computer controlled methods; and storage, reduction of solids, and disinfection of overflows of combined sewers when overflowing is necessary."

MR. STEIN: Well, if you feel that is the answer--

MR. SCHNARR: I don't know that this is the answer. This is what our engineering study is supposed to come up with.

MR. STEIN: I understand that. I am not sure we have the answer to the question. We are not sure, as far as I can tell, how much of your combined sewers are going into the river or what the load is. In preventing your basement problem--which I think is commendable, by the way, I thoroughly agree with you it is the first step. It would seem offhand that as far as an ultimate solution to the problem is concerned, which is the separation of the sewers and provision that material go to the treatment plant, we have handled about 60 percent of that load. We are not sure what happens to the other 40 percent. Let me give you my suspicion. I think it goes to the river untreated.

MR. SCHNARR: Well, it certainly doesn't all of it. I would certainly be misleading you if I indicated to you that I know exactly where they go, because I don't, frankly.

MR. STEIN: That is the point. I think for the peace of mind of us all we really should make a determination of where these wastes go.

MR. SCHNARR: I am sure that our sewer engineer has made this determination. There are some locations where I am sure there is some overflow into the river, although this again I couldn't make any specific statement on because I don't recall the specific projects.

MR. STEIN: Mr. Badalich.

MR. BADALICH: Mr. Chairman, I think if you refer to page 3, the second paragraph, they have indicated the desire for an extension of time in submitting this report. I think this report itself will probably have a lot of your answers on how they propose to correlate the three different areas of study and that is the use of the interceptor computer outfalls and also the use of their combined sewers and also detention times, etc.

So I think a lot of this will be answered in this particular report. We are asking for this just as patiently as the FWPCA is waiting.

MR. GADLER: Mr. Stein.

MR. STEIN: Yes.

MR. GADLER: You are asking Mr. Schnarr some questions and I would like to come to his defense because Mr. Schnarr has just become City Engineer of the city of St. Paul on May 19th or 20th or June 1st and consequently he has not been able to become as conversant with all of those details as he would be ordinarily.

MR. STEIN: Mr. Gadler, I hope I haven't been misconstrued. I did not direct any questions at Mr. Schnarr personally.

MR. GADLER: No, I understand that. But he just doesn't have it.

MR. STEIN: But we are dealing with the facts.

But let me ask Mr. Badalich a question. If we are going to wait another year for the study report, we are not going to--certainly, March 17, 1969, is past. Are we going to have to wait until March 17, 1970, to get this report?

MR. BADALICH: Mr. Chairman, I believe we are, because if you read the resolution, the Agency staff itself concurred in this, because, as Mr. Poston brought out, your R and D project is not completed and I think a lot of the bearing on this storm sewer separatio program for St. Paul bears on the successfulness and the programming of this computer system of regulating outfalls to the Mississippi River. So they had to have that background information before they could proceed with their plan, and we certainly, I individually and the staff, concur in this resolution of the city of St. Paul.

MR. STEIN: Do you want to make a comment, Mr. Poston?

MR. POSTON: I don't like to see these research demonstration projects be the reason that we hold up construction of needed facilities. I think that there are ways and means of handling our waste problems, and to me we are caught in a web at some times with these various projects when one is used against the other as a means of delaying construction. We are really in the business to speed up things and do a better job.

MR. BADALICH: Mr. Chairman.

MR. STEIN: Yes.

MR. BADALICH: Mr. Poston, is the ultimate in the separation of storm sewer and sanitary sewer going to be complete separation? I think the Federal Government itself is still toying with this question, and I believe I remember The Cost of Clean Waters that was put out by the Department of the Interior indicated that it would probably cost $55 billion to $60 billior dollars to separate these storm sewers in the major cities. So I think these R and D projects certainly have a useful purpose in pollution control, and if there are methods available besides complete separation, whether it is the use of detention basins or whether it is controlled gating, and so on, I think all these should be explored before we go on one particular method of abatement, I guess you would call it.

MR. POSTON: I am not convinced that every place that has combined sewers will utilize the same procecures that they decide in the Minneapolis area for separation of sewers. I think each one of these may have particular situations that require a particular type of a plan and I would like to see engineering studies go ahead and interpret what the best way is.

MR. BADALICH: I think St. Paul has probably been utilizing all three methods, as they stated in the last paragraph of their testimony.

MR. STEIN: Yes.

MR. SCHNARR: I would like to assure you that this is not being used as the means to hold up any construction, but I think we do need to be concerned about what we are building and what it is going to do, and I think if the best method is a combination of regulation plus storage and treatment, then this is the method that should be used, not purely storage or treatment.

MR. STEIN: Yes. By the way, I think this is an important point and certainly not directed at the city, but looking at the city of St. Paul resolution, two of the "whereases:"

"Whereas, subsequent to said conference the city of St. Paul did not receive from the Minnesota Pollution Control Agency until August 31, 1967, a notice of certain sewer system effluent standards"--this is on the last page, and this is, again, really not directed necessarily to the State either--"and a directive to complete certain sewer system studies by March 17, 1969."

In other words, one of the "whereases" for the delay is an action that they didn't receive certain effluent standards. And then they say:

"Whereas, conclusions of both the city of St. Paul and the Minnesota Pollution Control Agency with respect to the extent and character of necessary sewer system changes in St. Paul should properly await the results of a federally-funded research and demonstration project now being conducted by the Minneapolis-St. Paul Sanitary District."

I think we are faced with the situation here, gentlemen, of having an action--and we are as involved in those standards as you are, Mr. Badalich; this is not directed at the State in any way. Where we are dealing with the putting out of standards, where we are dealing with the funding of a research and development project by the State and Federal Government sponsoring it and we have a deadline for compliance, we just have to realize that the actions we take in other areas may be bona fide reasons for a discharger to rely on in not meeting those deadlines. And as a matter of fact, both of those things, both the effluent standards and the results of a research and demonstration project that our agencies and other arms of the agencies have put forth have been the basis of the resolution of the city of St. Paul for the year's delay.

Now, I am not saying that that year's delay is not justified, but I think we have to recognize in those other actions that we very well may be affecting a schedule that we set up in an enforcement conference. And you can't lay that at the door of the city of St. Paul at all. This is the State and Federal agencies.

MR. TUVESON: Mr. Chairman.

MR. STEIN: Yes.

MR. TUVESON: I direct your attention to the last "whereas" which you quoted, "Whereas conclusions of both the city of St. Paul and the Minnesota Pollution Control Agency with respect to the extent and character of necessary sewer system changes," etc. The Agency itself has taken no action. If there is such concurrence, it is the concurrence of the city of St. Paul and the Pollution Control Agency staff. I don't believe we have had it in front of us.

MR. STEIN: Yes. By the way, I think, Mr. Tuveson, that you have presented the same problem that we are faced with, and let me just add this right here, because this is the problem. I don't know that the conferees, the Federal conferees, had this before them. But if--and I am speaking for the Federal

Government--if our research and demonstration staff gives a grant for an operation which is going to affect this as well as your staff may do something, we as conferees or you as an agent are faced in effect with a fact accompli. The city comes forward with every reasonable assurance to rely on this, to feel that this has to be done before they can proceed in a reasonable fashion, and I think from an administrative point of view the Federal Government certainly has as big a problem as any State does in this.

But from an administrative point of view, I think we have to realize if we set up a compliance schedule,and whether it is the Federal staff or the State staff goes ahead with one of these other projects with any discharger, this very well may affect the compliance with that schedule. And this is something on which we have to look to ourselves.

And I want to make it again clear, this is not at all being directed to the city of St. Paul, because I think you had every right to and should have relied on what you did,here. There is no question about that. But I think both the State and Federal agencies have to look at themselves in this regard.

Are there any further comments or questions?

If not, thank you very much.

MR. SCHNARR: Thank you.

MR. BADALICH: Thank you, Mr. Schnarr.

The next I have, Mr. Chairman, is a letter, I believe, from the St. Paul Water Department I would like to have entered into the record. This is attached to my statement given this morning. This was made by Mr. Clifford W. Hamblin, the General Manager.

MR. STEIN: Without objection, this wil be entered as if read.

(Which said letter is as follows:)

WATER DEPARTMENT
SAINT PAUL, MINNESOTA
BOARD OF WATER COMMISSIONERS
COMMISSIONER ROBERT F. SPRAFKA, President
ROBERT F. [illegible] [illegible]

CLIFFORD W. HAMBLIN
General Manager

[illegible]

ROY W. HOLZER
Supt. of Distribution

[illegible] JWISSEN
Supt. of Water Supply

SUPPLY
MISSISSIPPI RIVER LAKES PUMPING [illegible]

July 16, 1969

JUL 17 1969
MINN. POLLUTION
CONTROL AGENCY

LIB.
ADM.
WQ
AQ
SW
SAAR
FILE
RWK

Minnesota Pollution Control Agency
c/o: John P. Badalich, Executive
Secretary & Chief Executive Officer
717 Delaware Street, S. E.
Minneapolis, Minnesota 55414

Gentlemen:

We have received your 'Information Release' dated July 10, 1969, regarding the Progress Evaluation Meeting in the matter of the Conference on Pollution of the Interstate Waters of the Upper Mississippi River and Tributaries to be convened on July 22, 1969.

We are unable to attend the Conference; consequently, by this letter, we wish to inform the conferees of the progress the City of Saint Paul Board of Water Commissioners is making in water treatment plant waste disposal facilities since the time of the preceding sessions of the Conference.

As you know, at the time of the preceding sessions the waste sludge from our softening process was being discharged to lagoons that were becoming nearly filled to capacity; and our filter backwash water was being discharged into the Municipal Sewerage System conveying wastes to the Minneapolis-Saint Paul Sanitary District waste treatment plant.

In January of this year, the Board awarded a contract for the construction of a Lime Recalcining and Washwater Recovery Plant which will cost $2,249,465.00. The plant is now under construction and we estimate that it will be completed and in operation by August 1, 1970.

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With these new facilities all filter backwash water will be recovered and returned to the water treatment plant for processing into finished water. The waste sludge from our softening process will be converted to usable lime in the recalcining plant. The lime, so obtained, will be used in the water treatment plant and any excess will be a marketable product which can be sold.

Needless to say, we are pleased to be able to report the above progress. Let us know if any additional information is desired.

Yours very truly,

Clifford W. Hamblin

Clifford W. Hamblin
General Manager

EAH/saa

MR. BADALICH: Mr. Chairman, next I would like to call upon the representative of the city of South St. Paul. I believe Mr. Don Peterson, City Engineer, will make a statement.

STATEMENT OF DONALD R. PETERSON, P.E.
CITY ENGINEER
SOUTH ST. PAUL, MINNESOTA

MR. PETERSON: Thank you, Mr. Badalich.

Mr. Chairman, Mr. Poston and members of the Minnesota-Wisconsin Pollution Control Agency and ladies and gentlemen.

I wish to make a brief statement reviewing what progress has been made by the city of South St. Paul in taking the necessary steps to attempt to comply with orders which have been issued for abatement of pollution of the Mississippi River. Before I get into my prepared statement, I would just like to clarify some questions that were brought up this morning by Mr. Dale Bryson concerning the bypassing of sewage at South St. Paul.

D. R. Peterson

We are presently in the process of expanding our sewage treatment plant. We are in a three-phase program of improvement. We are right now about ninety percent complete with the first phase. And in putting this first phase into operation, we are going to be removing six of the large sewage pumps in the primary pumping station and replacing these with larger capacity pumps. We have three wet wells and we will be taking one of these wet wells out of service at a certain period of time. In fact, that is this week.

This means that we will be losing some pumping capacity only during the time that we are replacing pumps, and we anticipate that this will be for a period of about five days. So the bypassing of sewage is that all of our sewage is getting primary treatment and secondary treatment and pond clarification except the extreme peak flows at a rate of over 15 million gallons per day, which is being bypassed directly to the river for a period of five days while the new pumps are being completed. We expect that these connections should be made this week and that is the extent of the bypassing.

D. R. Peterson

I would like to again point out that anything under 15 million gallons per day is getting treatment and is also going through our anaerobic stabilization pond. So whatever bypassing is necessary to make these connections is kept at a very bare minimum by using the other pumps that are in use.

The final order which was issued by the Minnesota Pollution Control Agency on December 31, 1968, orders the city of South St. Paul to conform to WPC 18 and that effluent from the municipal sewage treatment plant must not exceed the following limiting characteristics.

5-day BOD	35 mg/liter
total suspended solids	30 mg/liter
total coliform	5,000 MPN/ml

The order also stated that plans for construction of facilities to meet these requirements were to be submitted to the MPCA by June 17, 1969, that bids are to be let and awards made by December 17, 1969, and construction to be completed or facilities must be operational by June 17, 1971.

On November 19, 1968, I wrote a letter to

Mr. Badalich concerning our ability to meet the orders that were proposed.

On April 17, 1969, I made a prepared statement on behalf of the city at a public hearing held by the MPCA asking that a variance from the standards and times be granted. The request for variance made by the city of South St. Paul asks for the following standards and timing:

Standards

5-day biochemical oxygen demand	50 mg/liter
total suspended solids	50 mg/liter
total coliform group organisms	5,000 most probable number per 100 milliliters

Timing

1. Completion of testing on demonstration facilities to the extent that phase two expansion can be planned by December 31, 1969.

2. Completion of plans for phase two by September 1970.

3. Awarding of construction contracts by January 1971.

4. Completion of phase two expansion to comply with MPCA standards by July 1, 1972.

Mr. Badalich mentioned this morning the request for extension on the completion of the phase two expansion was granted to July 1, 1972, from the original standard, which I believe was June 17, 1971. We haven't heard anything on the reduction of the standards and are assuming that we will proceed on our phase two expansion to meet thirty-five milligrams per liter.

I will quickly summarize progress to date in improving our sewage plant expansion. Our original report, which was prepared in 1965, recommended improvements in three phases: Phase one was the construction of hydraulic improvements, new trickling filter distributors, chlorination facilities, new grit chambers, new hot industrial sewage line, a new industrial pumping station, new sludge transporter, and experimental facilities to demonstrate the feasibility of an experimental chemical treatment process; Phase two will consist of further improvements to meet the effluent

D. R. Peterson

standards dependent on the success of the chemical process; Phase three will consist of sludge handling and disposal facilities.

Plans were completed for the construction of phase one in September 1967 and contracts were let in January of 1968 for this first $ 3 million project.

At the present time we have completed 89.6 percent of the phase one. The pumping equipment is being installed at the present time and grit chambers (pre-primary) will be completed by September 15, 1969. It is contemplated that substantial completion so that all systems are operational will be completed by October 1, 1969, and final phase one completion by November 1, 1969. This is, I might add, a period of about four months over our original projections, and the contractor is proceeding at the quickest possible rate and we have commitments that these time schedules will be made.

At this time the feasibility of the Blaisdell-Klaus chemical flocculation process appears doubtful but we have experienced some success.

D. R. Peterson

I might clarify this, that we have experienced some success using certain chemicals, but the financial feasibility of using these chemicals at this time has not been determined. It is likely that this process will not be used but we are not certain at this time. We should have an answer late this year on that.

Our request for variance on the timing of our second and third phase expansion appeared realistic at the time we requested that variance, but I would like to state that certain developments have occurred which definitely affect the future improvements of our plant.

The first thing is the adoption of the Metropolitan sewer bill. Our proposed timing is realistic, but as stated in our request for variance, it would be more economical to provide additional treatment at Pig's Eye to relieve pollution of this stretch of the river than to increase treatment at South St. Paul which is presently over ninety percent removal. Removals to reach an effluent of thirty-five mg/liter at South St. Paul will require over ninety-eight percent treatment, whereas this would have the same effect as increasing Pig's Eye treatment only 0.42 percent. Now, with the advent of the metropolitan sewer bill, this appears to have some validity.

In regard to this, we are still assuming that we will meet these standards, but I believe that the Metropolitan Council is further evaluating this and there is a possibility that there might be a determination made or a request made that some of the increased treatment be transferred in location.

A second event which affects us is the unfortunate announcement that Swift and Company will terminate business in South St. Paul on November 29, 1969. We are still not certain if certain facilities will remain, but it is quite likely that the entire Swift operation will close. If this occurs, it will result in a decrease of approximately four MGD of strong industrial sewage which will affect the plant operation drastically. With the removal of this large sewage load, it is possible that with longer detention times possible due to phase one expansion and that by providing storage and recirculation and chlorination that we can meet the standards proposed with only the phase one improvements. In any event, it appears absolutely necessary to evaluate the flows and strengths remaining after November 29, 1969, and to completely redesign the plant to take into account these new conditions.

It appears necessary that we should have a complete summer and winter season of operation of our new facilities to evaluate their effectiveness before any further plant expansion is designed.

I hope that this statement furnishes you with the necessary information needed. Our request for timing changes are certainly not stalling tactics, but in our opinion are absolutely necessary to properly plan and to expend public money, whether it be local, metropolitan, State or Federal money.

I wish also to state at this time that a draft copy of our report on the separation of combined storm and sanitary sewers has been submitted to the MPCA for review and comment. The final report should be completed soon and will be submitted when complete.

And at this point I would like to add that we have hired a consulting firm to investigate the elimination of our combined sewage problem. We have attacked this in three methods. One would be the complete separation of all storm and sanitary combined sewers, the second would be the detention in storage basins of the overflow of the combined sewage and then chlorination and direct discharge to the river, and the third alternative would be the impoundment of the combined sewage in either underground or on-surface storage ponds with discharge in off-peak hours to the sewage treatment plant before discharge to the river. It appears at this time that the separation might be the most feasible answer, though we do have some further investigation and we will report this in detail within a month to the Pollution Control Agency.

The city of South St. Paul is doing all within its capabilities to improve the quality of the Mississippi and will continue to cooperate with the MPCA and FWPCA in this effort.

I want to thank you for the opportunity of presenting this report. Respectfully submitted on behalf of the city of South St. Paul by Donald Peterson, City Engineer.

MR. STEIN: Do we have any comments or questions?

Let's see if I understand this. After all, this is after the dust settles.

What you are doing really is asking for an extension from June of 1971 to July of 1972, is that a fair statement?

MR. PETERSON: That is correct. Yes, that is correct.

MR. STEIN: All right. In other words, what this all boils down to is that you anticipate it is going to take you another year to do it?

MR. PETERSON: That is correct.

MR. STEIN: All right.

Any other comments or questions?

MR. PETERSON: I would like to make one comment in regard to this, Mr. Chairman. With the closing of the Swift and Company plant, we will be going into a complete re-analysis of the system and it appears that we are going to have to have some time to evaluate whether we will meet these standards without further expansion or whether we will not.

I am stating at this time that it appears that we would need close to a year of evaluation to know whether we will be meeting these standards with the Swift closing or not. I am not asking for a further extension beyond the date which has been granted by the Pollution Control Agency at this time, but I am informing you of the new situation that has developed and that we will be in very close contact with you on this. We may be coming back for a further extension when we evaluate the effect of this closing.

MR. STEIN: Let me again get off the record here.

(Off the record.)

MR. STEIN: Let's go back on the record.

Are there any other comments or questions? Go ahead.

MR. POSTON: I would like to get back to this matter of bypassing. It is my understanding that South St. Paul is going to bypass when the flow is in excess of 15 million gallons a day, is that right?

MR. PETERSON: That is right.

MR. POSTON: Then my question is what amount of time during this 5-day period will the flow be over 15 million gallons?

MR. PETERSON: I believe I would have to refer that to our sewage treatment plant superintendent, who is in the audience. But yesterday was the date that we were to start bypassing for a period of five days. Yesterday we did no bypassing. Now, what is happening today, if our flows are exceeding the capacity of the pumps, I cannot say.

But maybe Mr. Larson could give us an estimate of the amount of time that this would happen. We are, I believe, expecting about 1-1/2 million gallons would be bypassed.

Is that correct, Mr. Larson?

MR. LARSON: May I speak from the floor?

MR. STEIN: Yes.

MR. LARSON: We will be bypassing at about a 2-1/2 to 3 million and maybe up to 5 million rate, but not flow. The rate will only occur for a period of 6 to 8 hours, so that the total bypass will amount to 1-1/2 to 2 million gallons and possibly we can hold it below that.

This situation was created because one

part of the plant had to be put out altogether and we can't put all of the sewage into the anaerobic stabilization pond with the facilities we have available.

MR. PETERSON: I might add that in an expansion of an existing plant if you are replacing pumps that are inadequate capacity, I know of no possible method of replacing these inadequate pumps with the proper size pumps without taking the old ones out of service. I very definitely state that the bypassing will be held at a very bare minimum.

MR. LARSON: Mr. Poston, this I realize we don't like, but many plants are able to avoid a situation like this because they have gravity flow. We have to lift our sewage three times, so that we haven't gravity flow.

MR. POSTON: I think that my concern with this is that our sewerage system is a utility, and it is the only utility that permits this interruption of service. The telephone company or the water company or the light company, they provide you temporary service, and in this case we are not getting that continuous service. I think that we are going to have to come to the time when we provide this continuous service.

MR. LARSON: Sir, I don't want to be argumentative, but I would like to point out that in spite of the fact that we are admittedly bypassing now, during the spring flood when other sewage treatment plants in the area were bypassing we gave ours primary treatment.

MR. STEIN: Oh, boy. I don't know whether you extricated yourself or you damned everyone else in the community. (Laughter.)

Any other comment or question?

MR. POSTON: The other question I have is what are you doing relative to disinfection of your effluent?

MR. PETERSON: We are installing chlorination facilities at the present time. This is part of our first phase expansion. These facilities are being installed at the present time.

We are running our effluent through a clarification, an anaerobic stabilization pond, which we extracted under 70 percent BOD removal, and under the first phase expansion which will be complete by November 1st we will have complete chlorination facilities to meet the requirements that were stipulated under the orders that we received.

MR. POSTON: The date for making that operational was what?

MR. PETERSON: This will be this year, November 1969. Everything will be completely operational by that time.

MR. STEIN: The Minnesota agency has taken no action on this request for an extension, have they?

MR. BADALICH: Mr. Chairman.

MR. STEIN: Yes.

MR. BADALICH: We have granted the extension to 1971 to meet the deadline of having the plant in operation to meet the 35 milligrams per liter effluent, but there is a very good possibility that after the first phase construction is completed that the city of South St. Paul may be able to meet the requirements of the Federal-State enforcement conference. This will remain to be seen after the successful operation of these facilities and also the progress on the R and D grant.

MR. STEIN: Any further comments or questions?

Thank you very much.

MR. PETERSON: Thank you.

MR. BADALICH: Mr. Chairman, I would like to next call upon Mr. Maurice Robins, the Chief Engineer and Superintendent of the Minneapolis-St. Paul Sanitary District.

Mr. Robins.

STATEMENT OF MAURICE L. ROBINS
EXECUTIVE DIRECTOR - CHIEF ENGINEER
MINNEAPOLIS-ST. PAUL SANITARY DISTRICT
ST. PAUL, MINNESOTA

MR. ROBINS: Mr. Chairman, conferees of the States of Minnesota and Wisconsin, also the Federal conferee, ladies and gentlemen.

I am Maurice L. Robins, Executive Director, Chief Engineer of the Minneapolis-St. Paul Sanitary District. On behalf of the Board of Trustees of the

Minneapolis-St. Paul Sanitary District I want to thank you for this opportunity to appear here and give this statement which demonstrates our progress on the stipulations of this conference.

During the past fourteen-month period since the Federal Water Pollution Control Administration conference of April 30, 1968, the Minneapolis-St. Paul Sanitary District has made significant progress in the fulfillment of the recommendations of the Conference Summary dated June 17, 1967. Previously adopted programs of plant expansion have been continued; new plans to accomplish higher treatment efficiency and greater capacity have been initiated and are now in the process of development.

The $27 million dollar plant expansion program which the Sanitary District commenced in 1962 is essentially completed and in operation. Using the high rate activated sludge process, the expanded plant accomplishes seventy-five percent BOD removal and eighty-five percent suspended solids removal.

The Sanitary District's sewage treatment plant now ranks among the ten largest plants in the country in terms of its capacity. Fifty suburban communities and four agencies are presently participants in sewage contracts with the central cities. With a tributary population of 1,366,600 persons, the Sanitary District treatment plant presently serves approximately fifty percent of the sewered population of the entire State of Minnesota. Present sewage flows average in excess of two hundred million gallons per day.

Recent accomplishments of the Sanitary District in its continuing program of water pollution control include the following items:

1. Submittal to the Minnesota Pollution Control Agency, in conformance with the Agency's and the Federal Water Pollution Control Administration's schedule, of an engineering report and preliminary plans for a further expansion of the Sanitary District sewage treatment plant.

Mr. Chairman, at this time I would like to have you enter officially into these proceedings the copy of that expansion report.

MR. STEIN: This will be done, without

objection. Is this the expansion report?

MR. ROBINS: That is the expansion report.

MR. STEIN: This will be an exhibit available at our offices in Washington and in Chicago and will not be included in the record.

MR. ROBINS: All right, sir.

MR. STEIN: Right.

MR. ROBINS: Thank you.

(The expansion report referred to is marked Exhibit 1 and is on file at the FWPCA Headquarters in Washington, D. C., with a copy on file at the FWPCA Regional Office in Chicago, Illinois.)

MR. ROBINS: 2. Adoption of a budget by the Board of Trustees of the Sanitary District which incorporates the funds necessary for planning and construction of the initial projects of a five-phase program of treatment plant expansion with a total estimated cost of $35 million.

3. Approval by the Metropolitan Council of the preliminary plans for plant expansion as presented in the "Report on the

Expansion of the Sewage Treatment Plant"
of April 1969.

I wish to mention that the appendix of this report does contain a copy of that approval letter.

4. Continuation of operation of the $27 million project of secondary treatment facilities and sludge disposal facilities.

5. Completion of construction and the commencement of test operation of the sewage regulator demonstration project.

6. Essential completion of construction of chlorination facilities, one of the components of the enlarged treatment works.

REPORT ON PLANT EXPANSION

In compliance with the Federal Water Pollution Control Administration recommendations and the Minnesota Pollution Control Agency ORDER of June 11, 1968, the Sanitary District has adopted the engineering report and preliminary plans for a further expansion of the sewage treatment plant to accomplish higher degrees of treatment and provide additional plant capacity. This document was submitted to the Minnesota Pollution Control Agency on April 29, 1969, in precise accord with the Agency's schedule and that established at the most recent conference of the Federal Water Pollution Control Administration.

The report recommends expansion of the sewage treatment plant using the Step Aeration Activated Sludge Process. The design is based upon the following items:

Design Period - Year 1980 to 1985 (dependent upon service area expansion, which the Metropolitan Council, of course, has the control of at the present time.)

Design Flow - Annual average - million gallons per day - 260.

Sewered Population	1,707,000 persons
Industrial Population Equivalent	1,299,000 persons
Total Population Equivalent	3,006,000 persons

Raw Sewage Concentrations

BOD-in milligrams per liter	250
Suspended Solids-in milligrams per liter	315

Plant Effluent Concentration

BOD-in milligrams per liter	29
Suspended Solids-milligrams per liter	30

Plant Effluent Load

BOD-in pounds per day	63,700
Suspended Solids-in pounds per day	68,000
Coliform Organisms-most probable count per hundred milliliters	5,000

Degree of Treatment

BOD Removal-net-in percent	88.2
BOD Removal overall-in percent, (which includes the return liquors recirculated through the plant)	89.9
Suspended Solids Removal-net-in percent	90.5
Suspended Solids Removal-overall-in percent	91.6
Coliform organism reduction-in percent	99.97

The proposed plant expansion has been divided into thirteen projects to facilitate the planning and construction of the overall program. Each project will be planned, bid, awarded, and constructed separately although many of the projects will be under way concurrently. The proposed projects are as follows:

Project 1 - Additional Aeration Tanks - West Battery.

Project 2 - Sludge Incineration Equipment.

Project 3 - Aeration Tanks, Pipe Gallery, Final Sedimentation Tanks - East Battery.

Project 4 - Aeration Compressor Equipment.

Project 5 - Enlargement of Screen and Grit Facilities.

Project 6 - Modification of the present Primary Sedimentation Tanks.

Project 7 - Addition to Administration Building.

Project 8 - Addition to Sludge Filtration and Incineration Building.

Project 9 - Sludge Thickening Tanks.

Project 10 - Ash Disposal Basins.

Project 11 - Plant Maintenance Shop and Warehouse.

Project 12 - Plant Flood Protection Works.

Project 13 - Air Pollution Control Equipment.

Figure No. 2-7 which is attached shows

the proposed arrangement of the major treatment units of the recommended plant expansion with a designation of each of the thirteen projects. This plant layout is one designed to readily accommodate further future expansion of the treatment plant beyond the immediate program. The secondary complex arrangement may be adapted to approximately 420 million gallons per day, nearly double the present day flow.

In total, this Five Phase Program is estimated to cost $35 million, including a minimal contingency for inflation. The estimated construction costs include all the structures, equipment, conduits, and site work necessary for a complete plant that will satisfactorily operate using the step aeration activated sludge process. Estimated project costs of the plant expansion are further given in the table herewith attached.

A time schedule of planning and construction has been developed which accomplishes the incremental construction of the treatment plant improvements essentially over a four-year period. The schedule places immediate priority to those projects involving secondary treatment works which directly affect plant effluent quality. It is believed that the program of planning and construction will satisfy the general intent of the wording of the ORDER which directs the Sanitary District to comply with the requirements of WPC 18 on or before June 17, 1971.

Figure No. 2-9 and Table No. 2-3 show the recommended schedule for the treatment plant improvements.

The proposed schedule is based upon a series of individual projects which are phased over a reasonable period of time to facilitate planning, provide contracts which can be handled by competent contractors, minimize interference with the operation of the existing primary and secondary plants, extend capital expenditures over a period of time and meet the Pollution Control Agency water pollution objectives.

With the recommended schedule, the existing sewage treatment plant would remain in continuous operation throughout the construction period with the possible exception of short duration curtailments to effect pipe connections or similar procedures. Also, the thirteen Projects which comprise the five phases of the program can be utilized to provide an increased degree of treatment as each is completed. Essentially, this means that the step aeration process, meeting the nominal ninety percent treatment requirements, will be operable in June 1971 as required by the original conference stipulations. Supplementary facilities for secondary treatment as provided in Phase 2 would maintain this level of treatment as the plant flow and load increased beyond the limited capabilities of the Phase I projects.

FINANCIAL ARRANGEMENTS FOR PLANT OPERATION AND EXPANSION

On June 23, 1969, the Board of Trustees of the Sanitary District formally adopted a budget for the year 1970 which includes funds for the implementation of the sewage treatment plant expansion program. In addition, the budget provides for the continuation of full operation of the present plant throughout the year 1970. Essentially, these budgeted amounts are as follows:

Operation and maintenance of the sewage treatment plant, sewer regulators, and intercepting sewers - $5,337,363.

Planning and construction of initial projects of a five phase program of treatment plant expansion with an estimated cost of $35 million - $7,840,000.

Total budget for year 1970 - $13,177,363.

That part of the budget designated for planning and construction of additions is based upon a schedule as presented in the "Report on the Expansion of the Sewage Treatment Plant" of April 1969, which I referred to, Mr. Chairman, and you will have in your office. In this report a program is proposed which accomplishes the incremental construction of the treatment plant improvements over a four-year period.

Funds are included for the commencement of construction and partial completion of the following projects:

Project No. 1 - Additional Aeration Tanks-West Battery.

Project No. 2 - Sludge Incineration Equipment.

Project No. 3 - Aeration Tanks-Pipe Gallery

Final Sedimentation Tanks - East Battery.

Project No. 4 - Aeration Compressor Equipment.

Project No. 7 - Addition to Administration Building.

METROPOLITAN COUNCIL

APPROVAL OF EXPANSION PLAN

In accord with the review procedure for the projects of agencies in the metropolitan area, the Metropolitan Council reviewed the Sanitary District's proposed preliminary plan for expansion of the sewage treatment plant.

Approval of the Metro Council Referral Committee was received on July 3, 1969. On July 10, 1969, the plan was formally approved by the entire Metropolitan Council.

A copy of the approved letter is herewith attached.

OPERATION OF TREATMENT PLANT

The existing Sanitary District sewage treatment plant has been constructed in two stages. The original "primary treatment" plant was placed in operation in 1938. In 1963, construction was started on the "secondary treatment" addition and this phase was subsequently placed in operation during 1966. With the completion of the new secondary treatment facilities, a portion of the sewage flow began to receive secondary treatment in addition to the primary treatment. Because of the limitation of the capacity of the sludge disposal works, the flow through the secondary plant was temporarily restricted to a rate commensurate with sludge filtration and incineration capacity.

When the sludge disposal expansion was completed and placed in operation in the spring of 1968, the percentage of sewage subjected to primary and secondary treatment was increased.

During the period of test operations of the sludge incinerators in October 1968, difficulties were experienced with the performance of these units. As a result, it was necessary for the Sanitary District to curtail secondary treatment and revert largely to a primary process with supplemental secondary sedimentation.

Upon the completion of modifications to

two of the sludge incinerators in June 1969, secondary treatment operation was reactivated. An acceptance test was conducted on one incinerator last week and the second is scheduled for the near future.

The Sanitary District is confident that the full operation of the secondary treatment and sludge disposal works will continue in the future.

SEWAGE REGULATOR DEMONSTRATION PROJECT

The Sanitary District has undertaken, and is currently operating, a $1.75 million project aimed at controlling the loss of polluted overflow from combined sewers during rainstorms and snowmelt conditions. The program, which is acknowledged to be the first of its kind in the Nation, has drawn much attention in the pollution control field and is financed in part with a Demonstration Grant awarded by the Federal Water Pollution Control Administration under the provisions of the Water Quality Act of 1965.

The project consists of forty-three remotely-controlled regulator gates and inflatable dams, forty-two sewer level monitors, five river quality monitors and eight rain gauges located throughout the

Twin Cities, with all components interconnected by telemetry to a process control computer. A mathematical model of the interceptor sewer system will be utilized to guide operational functions. During a period of excessive urban runoff, the complete system functions to reduce the discharge of combined sewage to the river until all of the conveyance and storage capacity of the combined sewer system has been utilized, and then determines which excess flow should be discharged to the river for minimal pollutional effect. Flow of combined sewage to the District's treatment plant has increased appreciably.

Operation of the system to date has shown that a substantial reduction in combined sewer overflows has been accomplished. Although the project, because of its unique nature, has encountered some difficulties with installed hardware and is still in a stage of mathematical model refinement, preliminary indications are that the system is an effective means of controlling sewer flows and overflows to produce results which approach those of substantial separation of storm and sanitary sewage, at a fraction of the cost of such separation. On-line operation of the system is continuing, with qualitative results of the program to be reported upon within the next two years.

A first stage preliminary report has been completed and is presently in the process of review by the Federal Water Pollution Control Administration project headquarters in Washington, D. C.

COMPLETION OF CHLORINATION FACILITIES

To comply with the Federal Water Pollution Control Administration recommendations and the Minnesota Pollution Control Agency ORDER with regard to disinfection of the plant effluent, the Sanitary District instituted the planning and construction of chlorination facilities.

The chlorination system consists basically of facilities for storing and handling liquid chlorine, equipment for vaporizing the chlorine, chlorine gas feeders, and diffusers at points of chlorine solution injection into the sewage flow. Chlorine solution may be applied at four locations--to the primary effluent, to the secondary effluent, to the spray water, and to the sludge at the thickening tanks.

For secondary effluent, the chlorination system incorporates an automated control system which permits economical operation of the chlorinators to suit the variable disinfection requirements. The control system is responsive to the chlorine residual level and rate of flow of the plant effluent.

The chlorination facilities represent an investment by the Sanitary District of approximately $900,000. At the present time, this project is essentially completed and is now in test operation.

SUMMARY

In summary, the Sanitary District has met the first deadline of the Schedule of Remedial Program of the Federal Water Pollution Control Administration. An engineering report and preliminary plans have been submitted as required. The report recommends a further expansion of the Sanitary District treatment plant to accomplish a higher degree of treatment and provide additional plant capacity. Total estimated cost is $35 million.

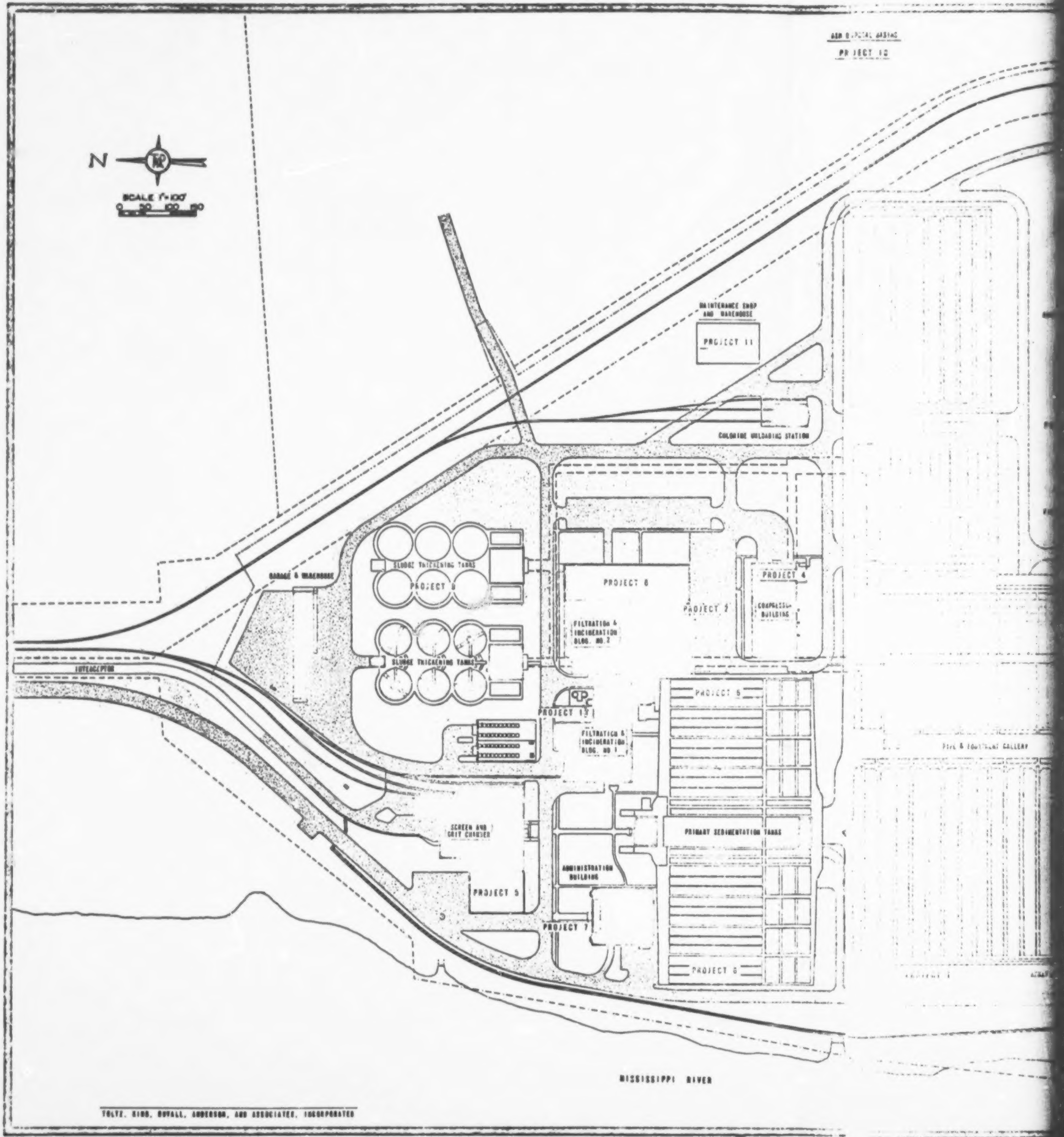
The Sanitary District Board of Trustees has adopted a budget which incorporates the funds necessary for planning and construction of the initial projects of a Five Phase Program of plant expansion. Final plans and specifications for the early projects are under way. Approval of the preliminary expansion plans has been granted by the Metropolitan Council.

Operation is continuing of the recent plant enlargement consisting of secondary treatment facilities and sludge disposal facilities.

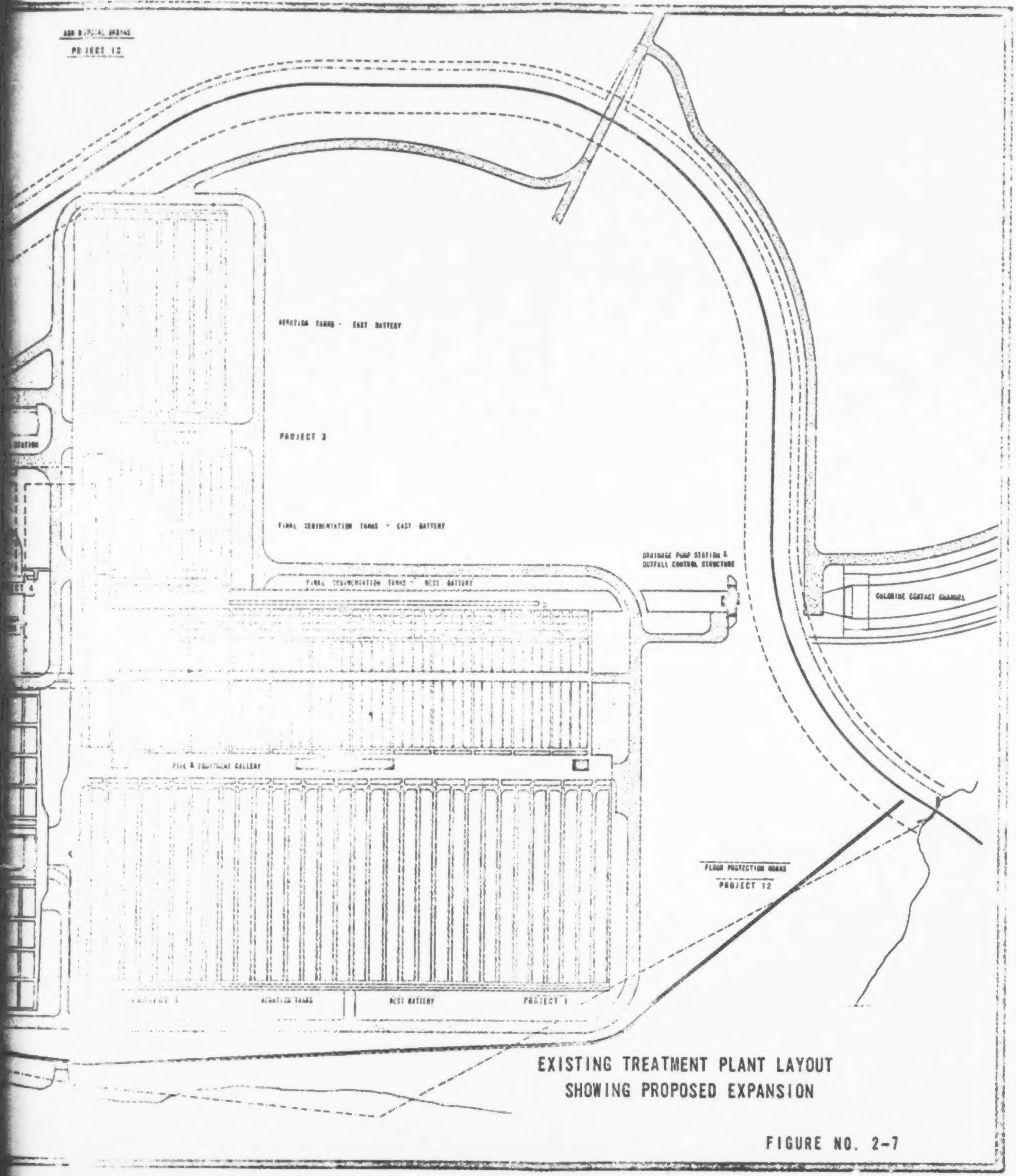
Test operation is in progress of the sewage regulator demonstration project which provides an effective and economical means of controlling sewer overflows from combined sewer systems.

In response to the FWPCA Recommendations and State ORDER, the Sanitary District has constructed a new system of chlorination facilities which will provide disinfection of the sewage effluent. This $900,000 project is essentially completed and, as I mentioned, in test operation at the present time.

(The following documents were submitted by Mr. Robins:)


N
SCALE 1"=100'
0 50 100 150
ASH DISPOSAL BASINS
PROJECT 10
MAINTENANCE SHOP AND WAREHOUSE
PROJECT 11
CHLORINE UNLOADING STATION
GARAGE & WAREHOUSE
SLUDGE THICKENING TANKS
PROJECT 9
PROJECT 8
PROJECT 2
PROJECT 4
COMPRESSOR BUILDING
FILTRATION & INCINERATION BLDG. NO. 2
SLUDGE THICKENING TANKS
INTERCEPTOR
PROJECT 13
PROJECT 6
FILTRATION & INCINERATION BLDG. NO. 1
PIPE & EQUIPMENT GALLERY
SCREEN AND GRIT CHAMBER
PRIMARY SEDIMENTATION TANKS
ADMINISTRATION BUILDING
PROJECT 5
PROJECT 7
PROJECT 6
MISSISSIPPI RIVER

TOLTZ, KING, DUVALL, ANDERSON, AND ASSOCIATES, INCORPORATED


PROJECT 13
AERATION TANKS - EAST BATTERY
PROJECT 3
FINAL SEDIMENTATION TANKS - EAST BATTERY
DRAINAGE PUMP STATION &
OUTFALL CONTROL STRUCTURE
FINAL SEDIMENTATION TANKS - WEST BATTERY
CHLORINE CONTACT CHANNEL
PIPE & EQUIPMENT GALLERY
FLOOD PROTECTION BERMS
PROJECT 12
AERATION TANKS
WEST BATTERY
PROJECT 1

EXISTING TREATMENT PLANT LAYOUT
SHOWING PROPOSED EXPANSION

FIGURE NO. 2-7

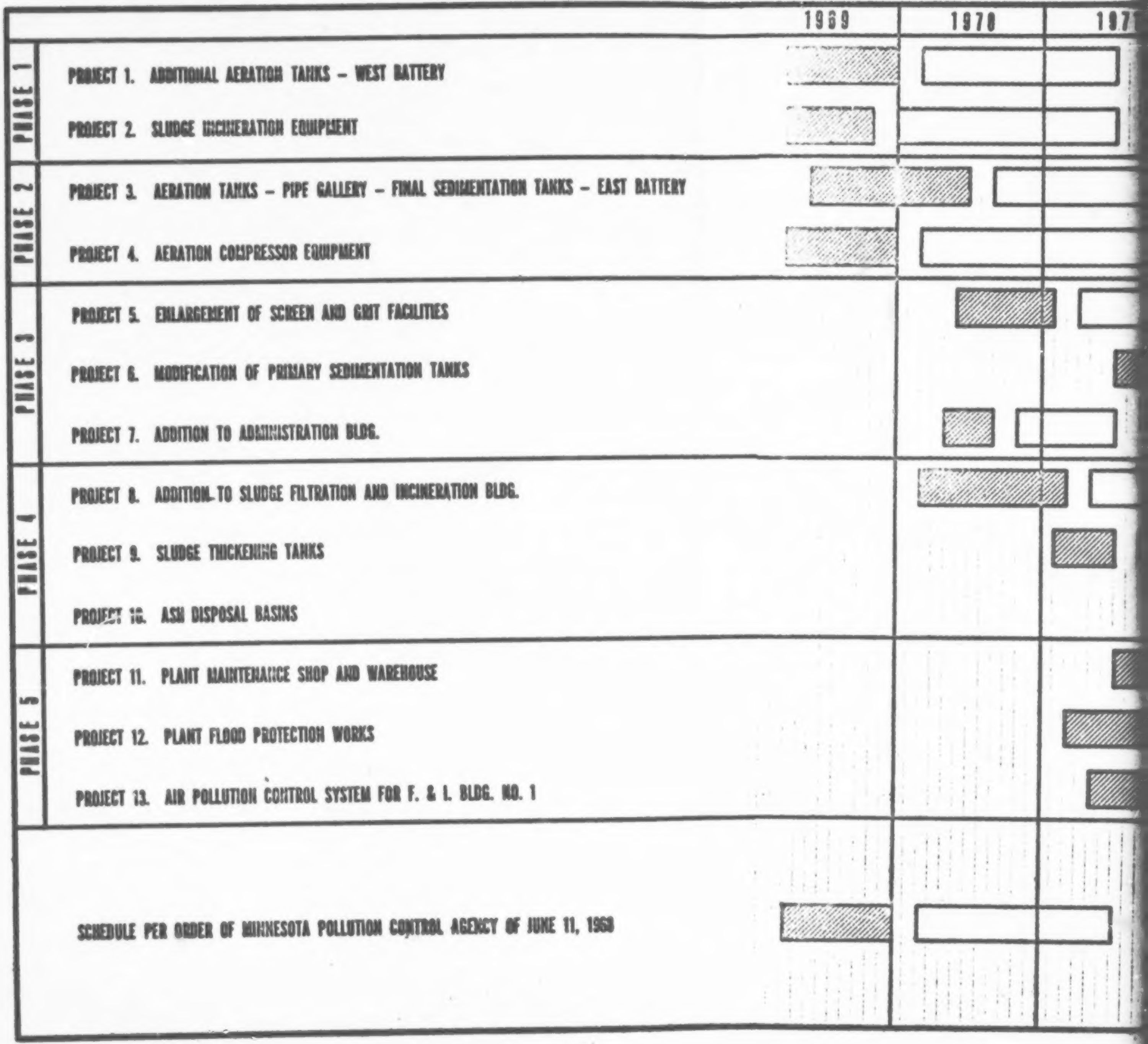
TABLE NO. 2-1
ESTIMATED CONSTRUCTION COSTS
SEWAGE TREATMENT PLANT EXPANSION

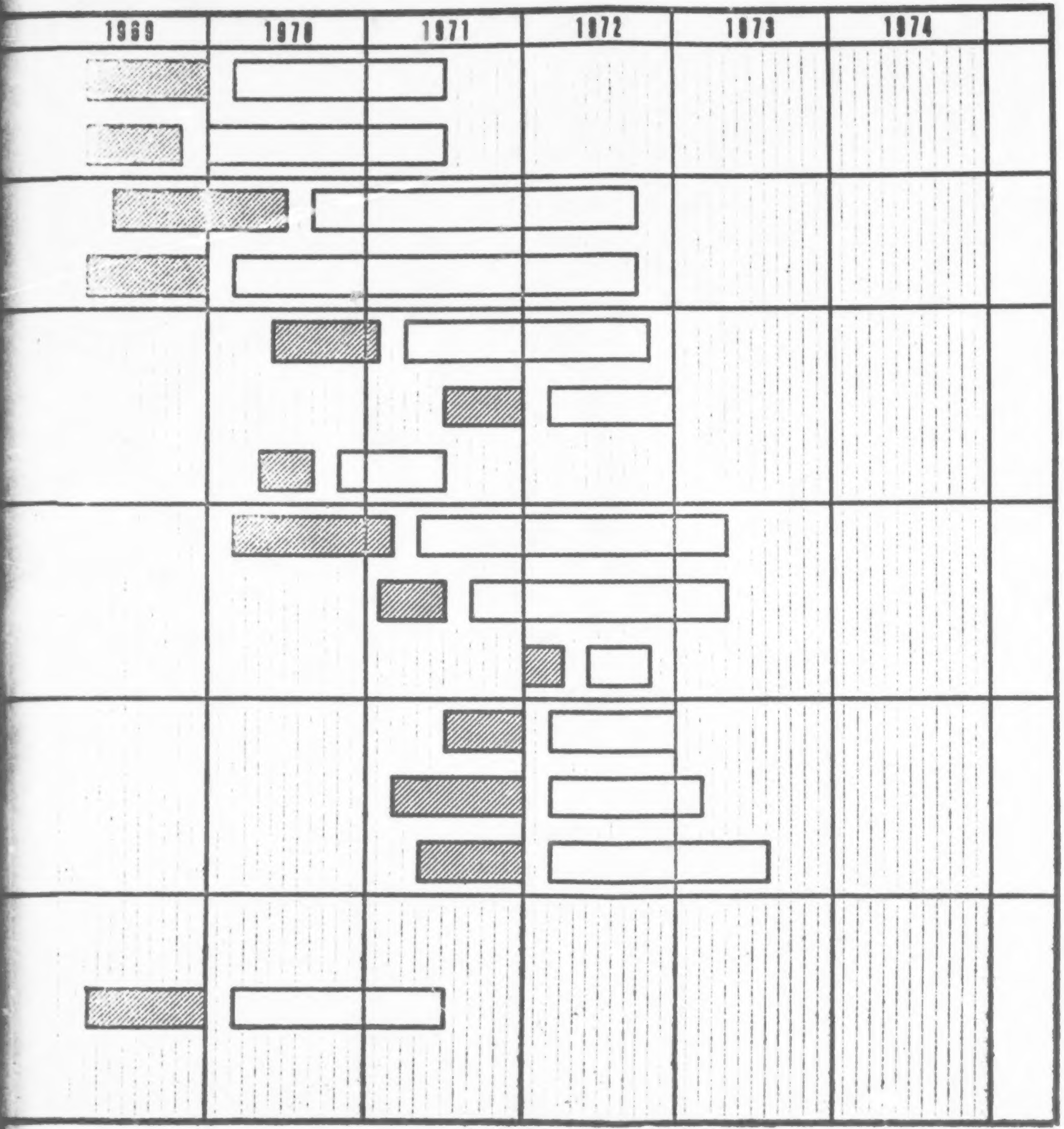
	PROJECT TITLE	PRINCIPAL COMPONENTS
PHASE 1	PROJECT 1. ADDITIONAL AERATION TANKS – WEST BATTERY	ADD FOUR NEW AERATION TANKS, A NEW INF MODIFY THE EXISTING PIPE AND EQUIPME
	PROJECT 2. SLUDGE INCINERATION EQUIPMENT	ADD ONE NEW SLUDGE INCINERATOR IN THE EXISTING FILTRATION AND INCINERATION
PHASE 2	PROJECT 3. AERATION TANKS – PIPE GALLERY – FINAL SEDIMENTATION TANKS – EAST BATTERY	ADD TWO NEW AERATION TANKS, THREE NEW TANKS, A PIPE AND EQUIPMENT GALLERY, CHANNELS AND CONNECTING TUNNELS.
	PROJECT 4. AERATION COMPRESSOR EQUIPMENT	ADD TWO NEW AERATION COMPRESSORS IN TH EXISTING COMPRESSOR BUILDING.
PHASE 3	PROJECT 5. ENLARGEMENT OF SCREEN AND GRIT FACILITIES	ADD FOUR NEW GRIT CHAMBERS, ADDITIONAL CONNECTING CHANNELS, AND MODIFICATIO SCREEN AND GRIT BUILDING.
	PROJECT 6. MODIFICATION OF PRIMARY SEDIMENTATION TANKS	ADD TWO NEW PRIMARY SEDIMENTATION TANK OF THE EXISTING TANKS.
	PROJECT 7. ADDITION TO ADMINISTRATION BLDG.	ADD NEW OFFICE SPACE AND RECEPTION ARE ADMINISTRATION BUILDING.
PHASE 4	PROJECT 8. ADDITION TO SLUDGE FILTRATION AND INCINERATION BLDG.	ADD EIGHT NEW VACUUM FILTERS, TWO NEW IN AN EXPANSION OF EXISTING FILTRATI INCINERATION BUILDING NO. 2.
	PROJECT 9. SLUDGE THICKENING TANKS	ADD SIX NEW SLUDGE THICKENING TANKS, S PIPE AND EQUIPMENT GALLERY AND CONNE
	PROJECT 10. ASH DISPOSAL BASINS	ADD NEW EARTH WALLED ASH DEWATERING A
PHASE 5	PROJECT 11. PLANT MAINTENANCE SHOP AND WAREHOUSE	ADD A NEW BUILDING TO CONTAIN A PLANT STORAGE AREA.
	PROJECT 12. PLANT FLOOD PROTECTION WORKS	ADD A CONCRETE FLOOD WALL, OTHER PERMA MODIFY OUTFALL CLOSURES.
	PROJECT 13. AIR POLLUTION CONTROL SYSTEM FOR F. & I. BLDG. NO. 1	ADD NEW AIR POLLUTION CONTROL EQUIPMEN EXISTING FILTRATION AND INCINERATION
	TOTAL CONSTRUCTION COST	

BASED ON ENR = 1300

TABLE NO. 2-1
ESTIMATED CONSTRUCTION COSTS
AGE TREATMENT PLANT EXPANSION

PRINCIPAL COMPONENTS OF PROJECT	ESTIMATED CONSTRUCTION COST	ESTIMATED TECHNICAL SERVICE AND CONTINGENCIES	TOTAL ESTIMATED PROJECT COST
FOUR NEW AERATION TANKS, A NEW INFLUENT CHANNEL, AND MODIFY THE EXISTING PIPE AND EQUIPMENT GALLERY.	$5,422,000	$ 542,000	$5,964,000
ONE NEW SLUDGE INCINERATOR IN THE SPACE PROVIDED IN EXISTING FILTRATION AND INCINERATION BUILDING NO. 2.	1,021,000	102,000	1,123,000
TWO NEW AERATION TANKS, THREE NEW FINAL SEDIMENTATION TANKS, A PIPE AND EQUIPMENT GALLERY, INLET AND EFFLUENT CHANNELS AND CONNECTING TUNNELS.	$6,168,000	$ 617,000	$6,785,000
TWO NEW AERATION COMPRESSORS IN THE SPACE PROVIDED IN EXISTING COMPRESSOR BUILDING.	634,000	63,000	697,000
FOUR NEW GRIT CHAMBERS, ADDITIONAL BAR SCREENS, CONNECTING CHANNELS, AND MODIFICATIONS TO EXISTING SCREEN AND GRIT BUILDING.	$1,400,000	$ 140,000	$1,540,000
TWO NEW PRIMARY SEDIMENTATION TANKS – ONE ON EACH SIDE OF THE EXISTING TANKS.	1,150,000	115,000	1,265,000
NEW OFFICE SPACE AND RECEPTION AREA TO EXISTING ADMINISTRATION BUILDING.	120,000	12,000	132,000
EIGHT NEW VACUUM FILTERS, TWO NEW SLUDGE INCINERATORS, IN AN EXPANSION OF EXISTING FILTRATION AND INCINERATION BUILDING NO. 2.	$6,265,000	$ 626,000	$6,891,000
SIX NEW SLUDGE THICKENING TANKS, SLUDGE HOLDING TANKS, PIPE AND EQUIPMENT GALLERY AND CONNECTING TUNNELS.	2,640,000	264,000	2,904,000
NEW EARTH WALLED ASH DEWATERING AND DISPOSAL CELLS.	250,000	25,000	275,000
A NEW BUILDING TO CONTAIN A PLANT MAINTENANCE SHOP AND STORAGE AREA.	$ 700,000	$ 70,000	$ 770,000
A CONCRETE FLOOD WALL, OTHER PERMANENT DIKING AND MODIFY OUTFALL CLOSURES.	2,641,000	264,000	2,905,000
NEW AIR POLLUTION CONTROL EQUIPMENT AND MODIFY EXISTING FILTRATION AND INCINERATION BUILDING NO. 1.	1,530,000	153,000	1,683,000
			$32,934,000


1969
1970
1971
PHASE 1
PROJECT 1. ADDITIONAL AERATION TANKS – WEST BATTERY
PROJECT 2. SLUDGE INCINERATION EQUIPMENT
PHASE 2
PROJECT 3. AERATION TANKS – PIPE GALLERY – FINAL SEDIMENTATION TANKS – EAST BATTERY
PROJECT 4. AERATION COMPRESSOR EQUIPMENT
PHASE 3
PROJECT 5. ENLARGEMENT OF SCREEN AND GRIT FACILITIES
PROJECT 6. MODIFICATION OF PRIMARY SEDIMENTATION TANKS
PROJECT 7. ADDITION TO ADMINISTRATION BLDG.
PHASE 4
PROJECT 8. ADDITION TO SLUDGE FILTRATION AND INCINERATION BLDG.
PROJECT 9. SLUDGE THICKENING TANKS
PROJECT 10. ASH DISPOSAL BASINS
PHASE 5
PROJECT 11. PLANT MAINTENANCE SHOP AND WAREHOUSE
PROJECT 12. PLANT FLOOD PROTECTION WORKS
PROJECT 13. AIR POLLUTION CONTROL SYSTEM FOR F. & I. BLDG. NO. 1
SCHEDULE PER ORDER OF MINNESOTA POLLUTION CONTROL AGENCY OF JUNE 11, 1968



PLANNING AND CONSTRUCTION SCHEDULE
FOR PROPOSED EXPANSION

FIGURE NO. 2-6

TABLE NO. 2-3

SCHEDULE OF PLANNING AND CONSTR

SEWAGE TREATMENT PLANT EXPANS

	PROJECT TITLE	TOTAL ESTIMATE PROJECT COST	TOTAL ESTIMATED PHASE COST
PHASE 1	PROJECT 1. ADDITIONAL AERATION TANKS – WEST BATTERY	$5,964,000	$7,087,00
	PROJECT 2. SLUDGE INCINERATION EQUIPMENT	1,123,000	
PHASE 2	PROJECT 3. AERATION TANKS – PIPE GALLERY – FINAL SEDIMENTATION TANKS – EAST BATTERY	$6,785,000	$7,482,00
	PROJECT 4. AERATION COMPRESSOR EQUIPMENT	697,000	
PHASE 3	PROJECT 5. ENLARGEMENT OF SCREEN AND GRIT FACILITIES	$1,540,000	$2,937,00
	PROJECT 6. MODIFICATION OF PRIMARY SEDIMENTATION TANKS	1,265,000	
	PROJECT 7. ADDITION TO ADMINISTRATION BLDG.	132,000	
PHASE 4	PROJECT 8. ADDITION TO SLUDGE FILTRATION AND INCINERATION BLDG.	$6,891,000	$10,070,00
	PROJECT 9. SLUDGE THICKENING TANKS	2,904,000	
	PROJECT 10. ASH DISPOSAL BASINS	275,000	
PHASE 5	PROJECT 11. PLANT MAINTENANCE SHOP AND WAREHOUSE	$ 770,000	$5,358,000
	PROJECT 12. PLANT FLOOD PROTECTION WORKS	2,905,000	
	PROJECT 13. AIR POLLUTION CONTROL SYSTEM FOR F. & I. BLDG. NO. 1	1,683,000	
	TOTAL CONSTRUCTION COST		$32,934,000

TABLE NO. 2-3
HEDULE OF PLANNING AND CONSTRUCTION
SEWAGE TREATMENT PLANT EXPANSION

TOTAL ESTIMATE PROJECT COST	TOTAL ESTIMATED PHASE COST	BEGIN FINAL PLANS AND SPECIFICATIONS	COMPLETE FINAL PLANS AND SPECIFICATIONS	COMMENCE CONSTRUCTION	COMPLETE CONSTRUCTION
$5,964,000		APRIL 1969	DEC. 1969	MAR. 1970	JUNE 1971
1,123,000	$7,087,000	APRIL 1969	OCT. 1969	JAN. 1970	JUNE 1971
$6,785,000		JUNE 1969	JUNE 1970	SEPT 1970	SEPT.1972
697,000	$7,482,000	APRIL 1969	DEC. 1969	MAR. 1970	SEPT.1972
$1,540,000		JUNE 1970	JAN. 1971	APR. 1971	OCT. 1972
1,265,000		JULY 1971	DEC. 1971	MAR. 1972	DEC. 1972
132,000	$2,937,000	MAY 1970	AUG. 1970	NOV. 1970	JUNE 1971
$6,891,000		MAR. 1970	FEB. 1971	MAY 1971	APR. 1973
2,904,000		FEB. 1971	JULY 1971	OCT. 1971	APR. 1973
275,000	$10,070,000	JAN. 1972	MAR. 1972	JUNE 1972	OCT. 1972
$ 770,000		JULY 1971	DEC. 1971	MAR. 1972	DEC. 1972
2,905,000		MAR. 1971	DEC. 1971	MAR. 1972	FEB. 1973
1,683,000	$5,358,000	MAY 1971	DEC. 1971	MAR. 1972	JULY 1973
	$32,934,000				

Metropolitan Council of the Twin Cities Area

Capitol Square Building, Cedar Street at 10th Street, Saint Paul, Minnesota 55101 Area 612, 227-9421

RECEIVED
JUL 16 19
Mpls. - St. Paul San. Dist.
ANSWERED
Date ________

July 14, 1969

Mr. Maurice L. Robins, P.E.
Executive Director - Chief Engineer
Minneapolis-Saint Paul Sanitary District
2400 Childs Road
Saint Paul, Minnesota 55106

RE: Plans for Expansion of Sewage Treatment Plant
Metropolitan Council Referral File No. 305

Dear Mr. Robins:

At its meeting of July 10, 1969, the Metropolitan Council considered the report of its Referral Committee on the proposed expansion of the Minneapolis-Saint Paul Sanitary District sewage treatment plant at Pigs Eye, as outlined in the April 1969 "Report on the Expansion of the Sewage Treatment Plant" prepared by Toltz, King, Duvall, Anderson and Associates, Inc. This proposal was treated as a plan of an independent agency and reviewed as required under the terms of the Metropolitan Council Act, as amended by the Metropolitan Sewer Act. Council staff findings on this plan were discussed with you and Mr. Walter Thorpe of TKDA at the Referral Committee meeting on July 3, 1969.

After consideration of the Referral Committee report, the Council adopted the following statement:

> "The Metropolitan Council finds that the proposed expansion of the Minneapolis-Saint Paul Sanitary District treatment plant at Pigs Eye is consistent with the Metropolitan Sewerage Plan in principle, and approves this expansion plan with the 13 identified projects but with the understanding that detailed plans and specifications will be submitted to the Council for appropriate review when available."

Sincerely yours,

METROPOLITAN COUNCIL

Marvin F. Borgelt
By
Marvin F. Borgelt
Vice-Chairman

/dms

An Agency Created to Coordinate the Planning and Development of the Twin Cities Metropolitan Area Comprising:
Anoka County ○ Carver County ○ Dakota County ○ Hennepin County ○ Ramsey County ○ Scott County ○ Washington County

MR. ROBINS: Mr. Chairman, may I say this, that if the conferees would withhold questions relative to the regulator demonstration program until at the end, I do have our present project engineer, Mr. Robert L. Callery, here who would be available to answer any and all questions regarding that project.

MR. STEIN: Thank you.

Maurice, this is great. I think this is such a tremendous change and such an improvement that this is the first time I think we really can see the light at the end of the tunnel.

Now, the obligation, of course, that Mr. Robins had in being in charge of the largest single gatherer and treater of wastes, of course, in this area was significant. I think we have the blueprint here for a cleanup. I think we have an expression of the will for this to be done. And if there is any single event which means that the case is cracked and you are going to have clean water in the Twin Cities metropolitan area, this is it.

I may have several points here, but I am not going to bring them up now, I am so overwhelmed.

Just one little one.

If you are going to have this stormwater project to take care of your snowmelt, for a fellow from Virginia who has been here very often, I never thought you had a snowmelt. (Laughter.)

MR. ROBINS: We do have that, sir. Sometimes it lasts as long as May, but we do have it.

MR. STEIN: Right. But I really do think that this is wonderful.

Speaking for myself, I think this report and the progress that we have, the dates that we see, for this area is epic making, because I have no doubt that this program is going through on schedule. If it does go through on schedule, we are on our way to licking the pollution problem in the Twin Cities' area.

Thank you very much, Mr. Robins.

MR. ROBINS: Thank you very much, Mr. Chairman.

MR. STEIN: Right. Do you want to call on anyone before we have questions or not? Or do we have any comments or questions?

Are there any comments or questions?

If not, thank you very much.

MR. ROBINS: Thank you, sir.

MR. STEIN: You have really overwhelmed us. You know, speaking for myself, it is five or six years I have waited for this to happen.

Thank you.

MR. ROBINS: Thank you, Mr. Chairman.

I thought Mr. Badalich had taken our title of No. 1 polluter away and transferred that over to the Metropolitan Council, but I see Mr. Lamm gave it back to us. Thank you, sir. (Laughter.)

MR. STEIN: Thank you.

May we have a ten-minute recess, please.

(RECESS)

MR. STEIN: We will reconvene.

MR. TUVESON: Mr. Chairman, Mr. Badalich is temporarily out of the room and has the order of appearances for the rest of the Minnesota delegation, but I believe at this time he was going to call on the representative from Hastings.

Come forward, sir, and introduce yourself, please.

STATEMENT OF JOHN L. DAVIDSON
CITY ENGINEER
HASTINGS, MINNESOTA

MR. DAVIDSON: Mr. Chairman, gentlemen of the Commission. I am City Engineer of Hastings, John Davidson. I did not come with a prepared statement today because I hadn't planned on making a presentation. However, in view of the fact that certain reference was made this morning to the city of Hastings operation and in particular to one of our residents, H. G. Hudson Manufacturing Company, I thought I possibly could clarify a few points in this regard.

I am not representing, however, H. G. Hudson Manufacturing Company. I have been working with Mr. Ed Field, the manager of H. G. Hudson, in studying the possibility of bringing all of the industrial flow into the city of Hastings sewer system and sewage treatment plant.

We have, as Mr. Badalich pointed out this morning, complied with all requirements of the FWPCA team statements as directed in the last conference. We have completed our treatment plant construction through secondary treatment. We are presently treating the sewage to 94 to 95 percent removal of BOD and solids, returning approximately 10 to 14 milliliters per liter of BOD and solids to the Mississippi River.

There is a problem, however, in accepting the flow from H. G. Hudson in that in their brass cleaning processes and zinc plating processes there is evidence of chromates in their effluent. They do pretreat their sewage, and I was not aware that they had the dubious distinction of being the only industry on the Mississippi not furnishing the Pollution Control Agency these monthly reports as required. I do know they are in the process of setting up their own laboratory so that they can comply with these requirements. I am also aware of the fact that they would like to put their effluent into the city of Hastings system, in which case we would be responsible for their reports.

That is all I have to say in regard to this subject. Thank you.

MR. STEIN: Thank you.

Are there any comments or questions?

If not, thank you very much.

MR. BADALICH: Thank you, Mr. Davidson.

Mr. Chairman, next I would like to introduce into the record the attachments I had onto our presentation. First of all, a letter from the S. B. Foot Tanning Company that was addressed to myself from Mr. Christensen, if I may introduce that in the record.

MR. STEIN: Without objection, that will be entered.

(Which said letter is as follows:)

S. B. Foo ning Co.

RED WING, SOTA 55066

July 14, 1969

Mr. John P. Badalich, P.E.
Executive Secretary & Chief Executive Officer
Minnesota Pollution Control Agency
717 Delaware Street S.E.
Minneapolis, Minnesota 55440

Project No. 1212 ODSG

Dear Mr. Badalich:

Please enter the following statement in the records during the progress evaluation meeting to be held July 22, 1969.

Equipment bids for the waste water treatment plant at the S. B. Foot Tanning Company will be received and opened in the Tanning Company Office July 15, 1969.

These bids are for all equipment other than the sludge dewatering and incineration section. This portion will be due for opening in early August.

Construction plans are approximately 98% complete and will be submitted to the Minnesota Pollution Control Agency and Federal Water Pollution Control Agency in the next few weeks for evaluation and comment.

All operating agreements and land transfers between the S. B. Foot Tanning Company and the City of Red Wing have been completed and signed by all parties. Copies of the agreements are in the files of the MPCA and the FWPCA.

We would expect to begin filling and piling for the project sometime in late fall of 1969, and complete the construction of the plant in spring of 1970.

The water quality standards as previously stated by the MPCA are those we are attempting to meet through the construction and operation of this plant.

As previously stated in the last progress report, we are operating a four year Federal Research and Development Program under Grant No. 1212 ODSG.

B. F. Christensen

B. F. Christensen
Project Director

MR. BADALICH: Next I would like to introduce for the record a statement by Mr. Paul L. Twedt, Plant Manager of Archer-Daniels-Midland Company of Mankato, Minnesota. That was also furnished as part of the presentation this morning.

MR. STEIN: Without objection, that will be accepted.

(Which said letter is as follows:)

July 15, 1969

State of Minnesota
Pollution Control Agency
717 Delaware Street S.E.
Minneapolis, Minnesota 55440

Attention: Mr. John P. Badalich

Dear Mr. Badalich,

Since I do not plan to attend your progress evaluation meeting, I would like to submit the following report on the progress at Archer Daniels Midland Company at Mankato, Minnesota.

The pollution problem at ADM has been corrected. The sewer which was contributing lime and boiler blowdown water to a local creek has been plugged and this material is now being sent to a settling pond. The only water that is being sent to the local creek is some condenser water which is clear water at about 80° F. Analysis will be made on the water. In appearance it is much clearer than the water in the creek upstream from the sewer.

The ground is absorbing all the water we are discharging from the boiler room.

Any water containing BOD is being sent to the city sewage treatment plant, as has been done for many years.

Our oil storage tanks are also diked so if they burst, no oil would enter the Minnesota River.

Archer Daniels Midland plant at Mankato is no longer contributing anything that would pollute the local creek nor the Minnesota River.

Sincerely yours,

Paul L. Twedt
Plant Manager

PLT:sn

MR. BADALICH: Next I have a letter that was attached to our presentation that was a letter from the Rahr Malting Company, under the signature of C. R. Alt, indicating their progress. I would like to introduce that in the record also.

MR. STEIN: Without objection, that will be accepted.

(Which said letter is as follows:)

REC
[illegible]
CONTROL AGENCY

282

RAHR MALTING CO.
GENERAL OFFICES
GRAIN EXCHANGE, MINNEAPOLIS, MINNESOTA 55415

PRESIDENT
CHIEF EXECUTIVE OFFICER

July 16 1969

Pollution Control Agency
State of Minnesota
717 Delaware Street S.E.
Minneapolis, Minnesota

ATTN: John P. Badalich
Executive Secretary and Chief Executive Officer

Gentlemen

We have your information release of July 10 informing us of the Progress Evaluation meeting in the matter of the Conference on Pollution of the Interstate Waters. We are relying on direction from our retained engineering counsel in this matter, but greatly appreciate being continuously informed.

Since we have for some time been connected to the sewage disposal system of the City of Shakopee, we are maintaining continuous contacts there. We anticipate further participation in the planning for compliance which is underway.

Sincerely

C. R. Alt

Since 1847
MINNEAPOLIS, MINN. • SHAKOPEE, MINN.

MR. BADALICH: I also have a letter here from the 3M Company under signature of Joseph T. Ling, Ph.D., Manager Environmental and Civil Engineering, regarding their progress since the last evaluation meeting, and I would like to introduce this for the record.

MR. STEIN: That will be accepted, without objection.

(Which said letter is as follows:)

3M COMPANY

GENERAL OFFICES • 3M CENTER • ST. PAUL, MINNESOTA 55101 • TEL. 733-1110

PLEASE REPLY TO: 3M COMPANY • P.O. BOX 3331 • 900 BUSH AVENUE
SAINT PAUL, MINNESOTA 55101

July 16, 1969

Subject: Progress Report
Wastewater Treatment Facilities
Chemolite Plant, 3M Company

Mr. John P. Badalich, P.E.
Secretary and Chief Executive Officer
Minnesota Pollution Control Agency
459 Board of Health Building
University of Minnesota Campus
Minneapolis, Minnesota 55440

Dear Mr. Badalich:

This letter is in response to your information release dated July 10, 1969, regarding a progress evaluation meeting in the matter of the Conference on Pollution of the Interstate Waters of the Upper Mississippi River and Tributaries. Our Chemolite plant is located in this stretch of the river.

As you know in 1962, additional new wastewater treatment facilities were constructed to expand and modify the existing facilities at Chemolite. These facilities, which presently are in use, consist of skimming and settling tanks, sludge concentration tanks, stabilization ponds, and neutralization facilities.

In August, 1966, construction of an addition to the existing pollution control facilities was started. This addition which is a modification of the activated sludge process consists of an equalization and neutralization tank, an aeration unit, two final settling tanks, a pump house, and necessary appurtenances such as pumps, air blowers, piping and flow measuring devices. These facilities were designed to provide an effluent (BOD concentration of 65 mg/L) that would comply in all respects with the State regulations that were adopted in March, 1963. At the present time this activated sludge facility is removing more than 90 percent of the BOD, resulting in a BOD concentration in the overall Chemolite plant effluent of well below 65 mg/L. This data is reported to the Minnesota Pollution Control Agency at the beginning of each month.

MINNESOTA MINING AND MANUFACTURING COMPANY

As a result, however, of the Federal-State Conference on the pollution of the interstate and intrastate waters of the Upper Mississippi River and its tributaries, a summary report was issued on June 17, 1967, outlining the general and specific recommendations of the conference regarding the water quality and treatment facilities to be provided by each individual source discharging wastewater to the river.

This report recommended that waste loadings from all sources between and including the Minneapolis-St. Paul Sanitary District (MSSD) and the South St. Paul sewage treatment plant not exceed 68,500 pounds of 5-day BOD per day. In addition, the State-Federal conference recommended that all municipalities below South St. Paul in this section of the river provide secondary treatment and a concentration of BOD in their effluent that does not exceed 50 mg/L.

It also was recommended that all industries below the area between MSSD and South St. Paul provide an effluent quality equivalent to that recommended for municipalities, or in other words, an effluent that does not exceed a BOD concentration of 50 mg/L.

As a result of this conference WPC 18 was adopted. Among other things this effluent standard requires a concentration of BOD that does not exceed 35 mg/L and a suspended solids concentration that does not exceed 30 mg/L.

Since the data shows that the effluent quality provided from the existing treatment facilities at our Chemolite plant will meet the river standards, and since the Federal-State Conference required an effluent BOD of 50 mg/L, we requested a variance from effluent standard WPC 18. This request was made in a letter to Mr. R. C. Tuveson, Chairman, Minnesota Pollution Control Agency, dated January 27, 1969. The request for variance included the following:

(1) Establish a 5-day Biochemical Oxygen Demand of 50 mg/L.
(2) Establish a total suspended solids concentration of 50 mg/L.
(3) Establish a turbidity value of 50 units.

It is our understanding that the request for the variance has been approved by the Agency.

In order to meet the conditions of the variance and WPC 18 the following additions and modifications will be made to the existing wastewater treatment facilities:

1. New Primary Settling Tank

In order to furnish additional settling capacity and improve operation flexibility we are planning to add one primary settling tank to the existing treatment system.

1. New Primary Settling Tank (continued)

The new tank will be 73 feet long by 16 feet wide. It is designed for 700 gpm (gallons per minute) and will provide a more efficient removal of suspended solids in the raw wastewater.

Normally this new tank will be operated together with the existing two settling tanks.

The final plans and specifications for this new settling tank will be submitted to the Minnesota Pollution Control Agency in August, 1969.

2. Improved Scum Removal Facilities

An improved scum removal facility will be added prior to the existing equalization tank. At the present time part of the equalization tank surface is used for manual scum removal. The new facility will provide more efficient scum removal before the wastewater is discharged to the aeration tank. This will result in a more efficient operation of the overall activated sludge treatment facilities.

3. Equalization Tank Modifications

The overall BOD removal efficiency of an activated sludge treatment facility can be improved by providing a uniform feed to the aeration tank. In order to do this pumping equipment will be installed as part of the existing equalization tank and the wastewater will be pumped at a continuous, uniform rate to the aeration tank.

To provide a more uniform feed of BOD to the aeration tank a mixer will also be installed in the existing equalization tank.

The mixer will be located in the center of the tank and will be operated on a continuous basis.

The final plans and specifications for these modifications will be submitted to the Minnesota Pollution Control Agency in the near future for review.

4. Chlorination Facilities

Chlorination facilities will be added to provide chlorination from May 1st through October 31st each year.

5. In-Plant Control of Wastewater

To continuously reduce the waste load to the present treatment facilities from the process areas the in-plant wastewater reduction program will be continued in order to determine any remaining major sources of wastewater discharge and what changes can be made at the source to reduce them.

We appreciate the opportunity to submit this progress report on the wastewater treatment facilities at our Chemolite plant to the conference. If we can provide any additional information, please let us know.

Yours very truly,

J T Ling

Joseph T. Ling, Ph.D., Manager
Environmental and Civil Engineering

JTL/jb

MR. BADALICH: And the final statement I have here that was sent to me is a statement from the M. A. Gedney Company, by Mr. Gedney Tuttle, President. I have that here and I would like to distribute it to the conferees. I would also like to have that introduced into the record.

MR. STEIN: Without objection, that will be accepted.

(Which said letter is as follows:)

Ref: MPCA 274
7/10/69

Reproduced from best available copy.

Phone: 445-4350

M. A. GEDNEY COMPANY

Chaska, Minnesota 55318

STATEMENT OF M. A. GEDNEY CO.

Before Conference on Pollution of Interstate Waters - July 22, 1969

The following statement is offered by the M. A. Gedney Company in response to an information release from the Pollution Control Agency, State of Minnesota, dated July 10, 1969 (MPCA274), urging industries contributing to the pollution of waters under consideration by this progress evaluation meeting to present information on what they have done or propose to do toward abating such pollution.

The M. A. Gedney Company is a packer of pickles and related products, located in Chanhassen, Minnesota on the Minnesota River between Chaska and Shakopee. Sanitary wastes from this facility are discharged to the municipal sewage plant in Chaska. Plant wastes are discharged to two lagoon-type stabilization ponds. The annual accumulation of said wastes is released to the Minnesota River each Spring during the high water period under controlled discharge over an approximate two week period only. The river is monitored during this period and the resulting data is transmitted to the MPCA and others. Under this method of discharge we have never shown any significant effect in the river. Construction of the lagoons was begun in the summer of 1965. In an effort to improve this system, we installed two 10 HP floating aerators in June of 1968.

Since the inception of effluent standards, we were confronted with a research problem in bio-degradation of wastes with the particular characteristics developed in the pickling process. A search of our industry failed to reveal any satisfactory system for treatment of pickle wastes.

During the summer and fall of 1968 we ran a series of aerated samples of varying strenghts of effluent to determine the bio-degradability of our effluents. The results of this experiment showed that our waste is readily biodegradable by aeration.

In November of 1968 we contacted Dr. H. Orin Halvorson to assist us in determining the research needed to establish data for possible plant designs. By January of 1969, avenues of research had been selected and construction and equipping of a research laboratory was begun. Monitoring of plant effluents in character and amounts, and operation of an experimental digester were begun approximately March 1, 1969. The feeding rates on this experiment have been increased from one-half liter per day to four liters per day currently, with reasonably satisfactory results. We will continue this experimental work until late Fall, 1969, by which time we should have established our maximum loading rate to the experimental digester. When the complete data is available, we will be able to begin design and construction of a treatment plant which will produce effluent complying with established standards of effluent.

This then, is a summary report of our progress in waste treatment, and of our intent to be in compliance with standards by June 17, 1971 in accordance with the abatement order issued to us by the Minnesota Pollution Control Agency on January 6, 1969.

Signed G Tuttle

Gedney Tuttle, President
M. A. Gedney Company

MR. BADALICH: Mr. Chairman, next I would like to proceed and call on Mrs. O. J. Janski, the President of the Minnesota League of Women Voters.

MR. STEIN: You know, the Rahr Company had some changes in the beginning. I read their letter and it was great. They wrote this to Mr. Badalich, and the operative sentence is:

"We are relying on direction from our retained engineering counsel in this matter, but greatly appreciate being continuously informed."

Give my regards to them. (Laughter.)

Great.

MR. BADALICH: Mrs. Janski.

STATEMENT OF MRS. O. J. JANSKI
PRESIDENT, LEAGUE OF WOMEN VOTERS
OF MINNESOTA, ST. PAUL, MINNESOTA

MRS. JANSKI: Thank you, Mr. Badalich.

Gentlemen.

Many of our Minnesota local leagues--we have 68 local leagues in Minnesota--have checked out their own communities to determine the status of local, municipal and industrial waste treatment facilities. Some are pleased with the progress being made, others are not. It is obvious that members are concerned that water quality standards be enforced and that the several levels of government work out the most effective method for enforcing these standards.

Before any enforcement program at any level of government can be successful, there must be public realization of the urgent necessity for strict enforcement. Laws are not easily enforceable without widespread public acceptance. The opinions expressed at the Minnesota Pollution Control Hearings on April 8, 17, May 13, 21, and June 23, indicated that the public backs strict enforcement of the standards. We urge that you grant no further postponements.

We recognize that State agencies are under strong pressures which make it difficult to carry out the pollution abatement program. Because the Federal Government is less affected by political and industrial interests powerful in a single State, the LWV is convinced that the Federal Government has an important role in strengthening enforcement of abatement proceedings when local and State efforts fail. We also feel that Federal help is often needed when interstate waters are involved. The problem of the laws regulating sanitation on boats in Minnesota-Wisconsin border waters is a case in point. Reciprocal agreement should result in the highest standards being maintained.

We know that local governments can feel beholden to employers with large tax contributions. We feel that pollution control is one of the costs of doing business. We are also aware that without Federal help, this is a financial impossibility for many small industries and municipalities. We are most concerned with the reduction in the request for Federal funds. The crux of the problem is the gap between the $1 billion needed for Federal sewage treatment facility construction grants-in-aid in fiscal 1970 and the 1970 budget request of the former administration which amounts to $214 million. Thus far, the new administration has left unaltered this fiscal 1970 budget request. This sum, the same amount appropriated for fiscal 1969, is inadequate to accelerate water cleanup. Standards in themselves will not make a single stretch of waterway less polluted and more inviting. Technology exists to do a far better job than is being done. States have assumed a share of the costs of local treatment facility construction, but the Federal Government has gone back on its promise of adequate assistance.

At the April 30, 1968, conference, Mr. Badalich stated that 64 percent of the offending industries and municipalities had corrected their disposal methods. Thirty-six percent had not, including the 12 largest polluters.

Today we heard that 71 percent now have corrected their disposal methods. Twenty-nine percent still remain, and of this 29 percent, we understand, we had some of the larger polluters.

The public waters belong not to a town or an industry but to all the people. In Minnesota and Wisconsin we have a unique situation. No other State is polluting our water. We receive it pure; we have no cleanup problem except for what we ourselves produce. There are increasing and varied demands for clean, open water that suggest far heavier demands in the years immediately ahead. There is a growing and deep-rooted concern about the quality of our environment and the threats to this quality from the waste of an expanding technology. There is also the movement of population to metropolitan areas which intensifies the rapidly growing pollution problem.

It is becoming increasingly important for industries to return water in as much the same condition as it was withdrawn. If we have made mistakes in the past, and we know we have, now is the time to remedy those mistakes. It is time for effective action. We can no longer treat water as a free resource that is used but once and discarded.

Thank you.

MR. STEIN: Thank you. Are there any comments or questions?

If not, thank you very much, Mrs. Janski.

MRS. JANSKI: Thank you.

MR. BADALICH: Thank you, Mrs. Janski.

Next I would like to call upon Mr. Donald W. Andrews, I don't know whether he is in the audience, representing the Minnesota Environmental Defense Council, but I did receive a communication from him indicating he would like to make a statement.

If not, we will proceed.

Next I have also a letter from Mrs. Ruth E. McLeod, Secretary of the Minnesota Environmental Control Citizens Association, requesting a statement be made. I believe Mr. John Pegors, one of the Directors of the Association, will make a statement.

Mr. Pegors.

STATEMENT OF JOHN PEGORS
DIRECTOR, MINNESOTA ENVIRONMENTAL CONTROL CITIZENS ASSOCIATION

MR. PEGORS: Mr. Chairman and conferees, the only comment that I would like to make on behalf of MECCA is that first we are pleased with the progress that seems to be evidenced here. We realize that the best laid plans of mice and men often do go astray, and we would urge the conferees to keep their minds on what these people have proposed today.

We have one question to ask of this group.

Is it possible that the new Prairie Island Nuclear Generating Facility, which will be in operation, one portion of it, by 1972, that the thermal discharges from this facility can be included in the matters which the conferees will consider? We realize that at the time the conference was originally called this was not a project that would come under the scope and jurisdiction of this group, but it would be wise to anticipate new major sources of pollution of the river and we would respectfully request that all of the thermal discharges be included in the conferees' deliberations.

Thank you very much, Mr. Chairman.

MR. STEIN: Thank you.

MR. BADALICH: Thank you, Mr. Pegors.

Mr. Chairman, this question was posed to me earlier by Mr. Pegors and by others. It is my understanding of this Federal-State Enforcement Conference that we are concerned with the dischargers enumerated in the original report, that is the report of 1967, that any subsequent dischargers or any new industries or municipalities to be located on the river are subject to the Federal-State interstate water quality standards.

And I would say in answer to Mr. Pegors' question that I believe any new industry or any new discharger coming into the area would be subject to these Federal-State interstate water quality standards. So I see no necessity for actually including this at this time in this conference.

Am I correct in that assumption?

MR. STEIN: I think that is correct.

The conference technique or the enforcement technique is to abate existing pollution. The Congress recognized that there was a gap there, and in order to prevent pollution they adopted the standards technique, which was to be preventive as well as corrective. And presumably that technique will be utilized to handle all future dischargers.

Now, we do have enforcement authority under that technique too, and that will be utilized if it is appropriate. But at the present time we do not have a discharge from the proposed Prairie Island installation. Is that correct?

MR. BADALICH: That is correct.

MR. PEGORS: Mr. Chairman and conferees--

MR. STEIN: By the way, if you are going to continue the colloquy, how about coming up here just for the secretary? Because it is very difficult for her to work all day this way.

MR. PEGORS: Well, Mr. Chairman and conferees, our purpose in bringing up this question about the Prairie Island Nuclear Generator lies in the fact that the proposed permit for nonradioactive discharges from the facility is in conflict with the WPC 15 or the so-called interstate standards that are under consideration and I believe now have been approved by the USDI. The proposed permit, a preliminary draft over the date of May 28th of this year, permits the use of the Mississippi River from the point of discharge into the river of the effluent from the Prairie Island facility down to below Lock and Dam No. 3 as a mixing zone. This particular stretch of river is subject to varying flow rates, varying all the way from 2,900 cfs. up to about 160,000 cfs., and we feel that, as you have indicated, this is a new source of pollution. But the conflict does exist between the proposed permit for this facility and the Federal interstate quality.

MR. STEIN: Whose permit?

MR. PEGORS: The Minnesota Pollution Control Agency's permit, which has been under discussion at the June 9, June 23 and July 7 meetings and one public hearing.

MR. STEIN: I will let Minnesota answer that. But as you can appreciate, as I understand it, there is still a real question of who issues the permit, AEC or Minnesota or both.

MR. PEGORS: No, this is a nonradioactive material. The permit has been split into two separate parts. This is what we are discussing.

MR. STEIN: I stand corrected on that.

Well, I think again, we have to approach this in an orderly manner. I don't want to prejudge this, but if the assumption is that Minnesota is issuing a permit which is in violation of the standards that they adopted and the Federal standards, we will be glad to take that up under our standards procedure. But since we are not dealing with an existing discharge, it is not amenable to this procedure.

By the way, I make no judgment, not having looked at that, whether the Minnesota permit is or is not in conflict with the standards it has adopted.

MR. BADALICH: Mr. Chairman, it certainly is not our intention to issue a permit that is less stringent than the Federal-State water quality standards. In fact, I would dare say, Mr. Pegors, that the permit as drafted in the preliminary form is more stringent than the WPC 15 regulation.

But then again this will be a topic of discussion at a formal hearing that the Agency has established on August 19th, and we will be hearing the public testimony regarding the nonradioactive wastes and also thermal discharge, so I believe that will be answered in the due course of time.

MR. STEIN: All right.

Are there any further comments or questions?

If not, Mr. Badalich.

MR. BADALICH: Mr. Chairman, this completes my list of those persons wishing to make a statement, unless there is somebody from the audience that would like to make a statement at this time.

Mr. Dienhart, the Vice President and Chief Engineer of the Northern States Power Company.

STATEMENT OF ARTHUR V. DIENHART
ASSISTANT VICE PRESIDENT - ENGINEERING
NORTHERN STATES POWER COMPANY
MINNEAPOLIS, MINNESOTA

MR. DIENHART: Mr. Chairman, conferees, ladies and gentlemen.

My name is Arthur Dienhart. I am Assistant Vice President of Northern States Power Company, Minneapolis.

NSP has been a participant in the proceedings of previous conferences. The NSP statement in the conference of April 30, 1968, emphasized our compliance with the recommendations of the conferees. Monthly reports submitted to the Minnesota Pollution Control Agency are evidence of our compliance not only with recommendations of the conferees but also with the water quality standards of the Minnesota Pollution

Control Agency.

The need for soundly established, clearly worded, and consistently administered environmental standards is fundamental to industry for the planning, the design, the procurement of equipment, the construction and the operation of electric power generating plants and similar major industrial facilities. Because of the 5- or 6-year leadtime required for the design and construction of major industrial plants, it is important that standards be developed on the soundest technical basis which is available and that they be changed only upon valid data which is developed to support such changes. Stability and consistency in the promulgation and administration of standards is fundamental to the development of a healthy economic climate in Minnesota or Wisconsin or any other political jurisdiction.

One of the best ways of evaluating environmental standards is through the monitoring of the environment as mentioned earlier by Mr. Bryson of the FWPCA. NSP has several environmental monitoring programs in progress and the status of these programs is well known to the appropriate Federal and State agencies. NSP welcomes any increased activity by Federal and State agencies in environmental monitoring which is conducted in such a manner as to eliminate much of the uninformed speculation and the inappropriate transfer of unrelated environmental information which have characterized the opposition to electric powerplant projects in this region.

Previous testimony by the Minnesota-Wisconsin Boundary Area Commission mentioned specifically NSP's Prairie Island Nuclear Generating plant now under construction on the reservoir of Federal Lock and Dam No. 3 near Red Wing, Minnesota. The plant is being designed to comply fully with the promulgated standards of the Minnesota Pollution Control Agency for thermal and other wastes. The designs also will meet the Wisconsin standards for these discharges.

Pre-operational and post-operational environmental monitoring and reporting will supply evidence of compliance. The plant will not discharge any oxygen demanding wastes to the Mississippi River.

NSP's permit application for the Prairie

Island plant mentioned in earlier testimony covers thermal and chemical wastes under jurisdiction of the Minnesota Pollution Control Agency. Technical data concerning radioactive wastes and their treatment has been supplied to the Agency also. Insofar as rad waste treatment is concerned, the plant is being designed to meet standards for safeguarding the public health and safety as established by the appropriate Federal agencies.

In summary, NSP supports and complies with the objectives of this conference and the sponsoring agencies. We believe the concept of carefully developed, consistently administered standards is vital to the welfare of the people of this region.

Thank you for the opportunity to present this statement.

MR. STEIN: Thank you.

Are there any comments or questions?

If not, thank you very much.

MR. BADALICH: Mr. Chairman, I believe this concludes the Minnesota participation in this conference, so I will turn the chair back to you.

MR. STEIN: Does anyone at this time

feel they want to say something? Because at the conclusion of this, we are going to terminate public participation and have a discussion among the conferees and try to come to an evaluation, conclusions and recommendations, if any. So if anyone wants to say anything, just make it known to me now or else we will proceed with our discussion and evaluation.

CLOSING DISCUSSION AND EVALUATION

MR. STEIN: It seems to me we have three areas of concern and I guess you can check these out any way you want. One is the sources of waste falling under the Federal jurisdiction--one under Wisconsin and one under Minnesota. I think the Wisconsin one may be the easier to handle at the beginning. I would say the reports here indicate that all the sources in Wisconsin are in substantial compliance with the recommendations of the conference. Is that correct? If there is any difference there, I think we should hear it.

If not, then we have the Federal people. With the Federal we have two ships and one NIKE site with which, evidently, there might be problems. I will review the proposal. The proposal is that Mr. Gamet get together with the Corps of Engineers, the Coast Guard and whoever is responsible for that NIKE site and within a month indicate the remedial action which is going to take place and send that to the conferees.

I think with the NIKE site we have this. If we are committed to that 1972 date because of the budgetary process, one thing remains unanswered: Is there something they can do in between if they are discharging waste into a ditch and if there is an odor problem to alleviate that while the program is going forward. I make no specific suggestion, but something like chlorination of the material before it goes out.

MR. GAMET: They are already chlorinating.

MR. STEIN: Pardon?

MR. GAMET: They are already chlorinating.

MR. STEIN: They are chlorinating this before it goes out?

MR. GAMET: That is right. But it is going into the ditch.

MR. STEIN: Where is the smell coming from?

MR. GAMET: Pardon me?

MR. STEIN: Where is the smell coming from?

MR. GAMET: It is some place along in the ditch.

MR. STEIN: Mr. Gamet, I think if they are properly chlorinating that loading of effluent, it seems to me that there can be an odor control problem for the year. This isn't a tremendous load from 100 people at the NIKE site.

MR. GAMET: That is correct.

MR. STEIN: And I think this should be looked at and the report should be made in order, if we are going along with this, to have the best possible operation while we are here.

As Mr. Wisniewski pointed out, on the other problem of the holding tank on the Coast Guard ship, I think we should explore the possibility of making arrangements or seeing if they can make arrangements with the pump-out facilities on shore. I think the suggestion is entirely appropriate. If they can't find any marina to do it, they should get a man who cleans out septic tanks and make a contract with him, an appointment to come up to him to a docking facility and pump this out. As far as I can see, there is no reason to dump this into the Mississippi River.

Then with regard to the Corps of Engineers' boat, I think the Colonel indicated to us that they should be able to give us a schedule within a month and a program for their proposal to stop the discharge of wastes from that vessel. We should get that report from you and Mr. Poston sent to all the conferees

MR. GAMET: We will consult with all three agencies.

MR. STEIN: And when the report is made available it will be made public.

That handles two.

Then we come to the Minnesota situation. As I pointed out, Minnesota has a very active program in dealing with the pollution situation. I believe in view of the complexity of the program, the way Minnesota has handled this and the kind of report it presented deserves commendation indeed. The State program is excellent.

All indications are the Minneapolis-St. Paul District will be completed on schedule, at least that is the prognosis now. If you have dealt with many of the large cities of the size of Minneapolis-St. Paul--I have said this before--if you want to know what the large cities are, look at the roster of your major league baseball and football teams and if they are in the big leagues they have got a big league water pollution problem. So those are the cities with which to compare them. I have no doubt that in working this out, it has taken a lot of hard work. In fact, I know it has taken work on the part of the Federal people, the State people and the people in this area to get the program going. The idea that at this stage we can still be on schedule with the Twin Cities program is indeed an achievement.

We are lucky in a sense that the Twin Cities area really has a fairly garden variety of municipal and industrial wastes--one that has been treated many times before and is amenable to known methods of treatment. The kind of reporting that Mr. Robins gave us was based on very conservative, sound American engineering. There is no reason to believe it shouldn't work. We must keep on top of the schedule and see that it is completed, because, as we know, unless we keep our eyes on it something might happen. However, if the schedule is completed, we are on our way to cleaning up the problem here.

As far as the 12 areas or the other 11 specific dischargers are concerned--some of the conferees may have their views on this; correct me if I am wrong--there isn't going to be operational slippage on those 12 of more than a year in any case; is there?

MR. BADALICH: Well, it isn't determined at this time, Mr. Chairman. We are indicating here of the 16 dischargers that they are not in compliance as far as the goal of the river standards that we have adopted, but they are on a compliance schedule and we just have the three that I have noted on page 12 where an extension or some direction has been given by our agency and we feel that maybe concurrence should be given to this by the conferees.

MR. STEIN: Would you go over the three and those dates again?

MR. BADALICH: Yes. They were noted on page 12 of my statement.

South St. Paul, the agency granted an extension to July of 1972 from the June 17, 1971, deadline.

Mankato with an extension to December of 1971 from the June 17, 1971, deadline.

And then as far as the American Crystal Sugar Company is concerned, the allowance of the spring release of sludge pond supernate to counteract an odor problem that is occurring during the winter storage of their sludge deposits. This is only done during the time that the river quality is high enough to receive this and it is done under controlled method.

MR. STEIN: Well, what happens when these go out? Is there any real deleterious effect on the river?

MR. BADALICH: We haven't noted any at this time, Mr. Chairman. I think this is a practice that is being followed to some extent on the Red River. But there again the American Crystal Sugar has a complete flow system but we have run into this odor problem and that occurred last spring.

MR. STEIN: Don't use the Red River as an example. Under the ice we have had some bad experiences, as you know, in the spring when the oxygen has gone down to zero.

MR. BADALICH: Then we would not allow it here in this particular case. We have checked with the monitoring stations of the FWPCA and as soon as the situation does reach a critical stage then any release would be curtailed, so we will watch that.

CLOSING DISCUSSION AND EVALUATION

MR. STEIN: By the way, on the safeguards on that, and I think the safeguards are probably DO safeguards more than anything else--

MR. BADALICH: That's true.

MR. STEIN: --how low do you let the DO get before you curtail it? Of course you have a different situation here. You have more water and the Red River is relatively a smaller flow of water under ice cover where you are not getting any oxygen. Do you have a limit on the amount that you let the DO go before you curtail discharge of sludge.

The reason I ask that is, the problem we have had when this happens, if the DO, dissolved oxygen, gets down to zero you can wipe out all the life in the river, which is a pretty serious effect.

MR. BADALICH: I think the minimum level would be the permissible level under the interstate water quality standards, and if I remember correctly I believe this is 4 milligrams per liter. Is that right?

MR. STEIN: Is that correct?

MR. BADALICH: Is that the minimum standard on the Minnesota River, Joe?

MR. JOHANNES: Normally, but during the spring period of discharge I believe it is 5.

MR. BADALICH: All right.

MR. STEIN: In other words, you won't let the DO get below 5 even when they are having this discharge during the spring?

MR. JOHANNES: I believe that is right, yes.

MR. STEIN: Is there any objection to accepting that variance?

MR. POSTON: I talked to a representative of the American Crystal Sugar Company during the recess. And he indicated that there was no problem with water pollution--that it was more a variance requested because of air pollution and that they were installing a dry sludge handling, which Mr. Badalich mentioned in his report, to handle this sludge with a high percentage of solids and that then there is no water to discharge. This was my understanding.

MR. BADALICH: Yes, that is true, Mr. Poston. But their effluent, the sludge being discharged, which is in a liquid state, does not meet our effluent quality standards, so that is the reason that the deviation is given. We have an effluent requirement as well as a water quality requirement. So we will not deviate from the water quality requirement but we will from the effluent.

MR. POSTON: In other words, you are going to meet the water quality standard as set forth by the conferees?

MR. BADALICH: Yes.

MR. POSTON: And the water quality standards?

MR. BADALICH: Yes, that is right.

MR. STEIN: Is that agreeable, then? Is there any objection to that?

MR. POSTON: I think that these discharges should be on a case-by-case basis. In other words, we should try to have them call on the State pollution agency at each time they make this discharge so that there isn't a promiscuous more than necessary number of times at which they would make these releases.

MR. BADALICH: Yes, that is right, Mr. Poston. They are obligated to inform the agency and that was done this spring and then we in turn will watch the control discharge and the automatic monitoring station on the Minnesota River will certainly give us the desired results in the event that they are exceeded.

MR. POSTON: And then they ask and you give permission--

MR. BADALICH: That is correct.

MR. POSTON: --at the time of the request?

MR. BADALICH: That is right.

MR. STEIN: With those restrictions, is there any objection?

I think the key points here that are obviously going to be looked at, you really do a check on the DO. I don't think there is a coliform or any other check. In other words, if the DO does not go below five and they indicate to you when they are going to--

MR. BADALICH: It is four. Correct that to four.

MR. STEIN: That is what I thought. That is a little better. I think this jibes more with reality. I was a little surprised when he said five.

If the DO does not go below four parts per million and the discharge is reported to the agency, then they will be permitted to do it. Is this all right? Go ahead.

MR. POSTON: I think that is right.

MR. STEIN: O. K. Let's work our way up to Mankato. There is an extension to December 1971. What is the reason for that, Mr. Badalich?

MR. BADALICH: I believe, Mr. Chairman, that they would like to get in the final construction period. As you know, here in Minnesota we are confronted with the adverse weather conditions during the winter and they would like to be allowed the full construction period during the year of 1971. So they have asked in effect an extension of approximately six months.

MR. STEIN: Is there any objection to that? In other words, the reason for that is a short construction season and they feel they need another six months to take advantage of the full 1971 season for being in compliance?

MR. BADALICH: That is right.

MR. STEIN: Is there any objection to that

MR. POSTON: Are they behind schedule at this time?

MR. BADALICH: I believe they are insofar as the submission of the final plans, but there again they felt that they could accelerate their submission of plans so as to meet the construction deadline of December 1971 along with the award of contract, and so on. But we are riding herd on them and I certainly hope that in good faith they will meet this required date.

MR. POSTON: I have strong feelings about extending deadlines until at least the deadline which we have given has been passed. I think it is brought out by the discussion of South St. Paul that they wanted an extension of a deadline and then they figured that maybe they are going to come back for another one. This is the gist of what I got out of this and I don't like to get myself in a position of giving one extension and then another extension at a later date. I think the pressure goes onto the conferee the minute that he grants that extension and I would rather have the pressure on the polluter than on myself.

And therefore, I think I would suggest

until they get behind on this deadline that we not go ahead and give an additional extension at this time.

MR. BADALICH: Mr. Poston, you are speaking of the final construction deadline then?

MR. POSTON: Yes.

MR. BADALICH: Mr. Chairman, the agency has already extended this deadline to December 1971 on that basis and hopes that the construction schedule will be maintained.

MR. STEIN: Do we have any other statements on that? In other words, we recognize that you have extended the deadline. Do the conferees want to take a stand on extending that deadline at this time or do you want to let that go?

Mr. Poston?

MR. POSTON: I would prefer to wait until they become delinquent before I would consider the extension of a date.

MR. STEIN: Do you want to comment on this at all, Mr. Damon?

MR. DAMON: Not particularly, other than in our own experience we usually don't like to talk about extending after the date has become delinquent because then it is after the fact and the guy is a violator and polluter and he is going to court about that time. We don't talk extensions at that time. I find, while I appreciate what Mr. Poston is trying to do, I find the procedure a little foreign to ours in Wisconsin. If there is going to be an extension granted it has to be made timely, it has to be made prior to the date of delinquency, because once he is delinquent he is in trouble.

MR. STEIN: Mr. Poston?

MR. POSTON: Perhaps there is an intermediate date which has been exceeded here that would require some extension, and I think it would be agreeable to consider that. But this final date which is over a year away, to extend that, I think we would be having additional meetings prior to that time and that there might be ample time to satisfy Mr. Damon's problem between now and the final deadline date.

MR. BADALICH: Mr. Chairman, if I may elaborate a little more, the city of Mankato was to have their final plans and specifications in on June 30th of

1969, and these plans have not been formulated at this particular time. They feel, according to their consulting engineer, that they will not be presented until the latter part of this year, so that the award of contract will not be made before possibly December of 1969 and then we are allowing the reasonable construction period. So they have exceeded the one deadline already, Mr. Poston.

MR. STEIN: Do you want to make any judgment on that or do you want to defer?

When are they supposed to get the plans in?

MR. BADALICH: They were supposed to have them in by June 30th of this year, but we are hoping they will have them in before the end of the year.

MR. STEIN: How much before the end of the year?

MR. BADALICH: Maybe I could defer this question to the staff.

Mr. Johannes?

MR. JOHANNES: They should have a full six months' extension from the June deadline, which logically then would take them to the middle of

December.

MR. STEIN: To get the plans in?

MR. JOHANNES: That is right.

MR. STEIN: Then how can they let the contract by the end of December?

MR. JOHANNES: No, I don't believe they can actually let the contract. It would be early next spring.

MR. STEIN: Well, may I make a suggestion on this? And I ask Mr. Damon and Mr. Poston and all of you to comment on this. Why don't we wait until we hear, and you are assuming that we are going to hear by the end of December, whether they have gotten their final plans and specs in, right?

MR. TUVESON: Mr. Chairman, I presume they are delinquent now?

MR. STEIN: That is right.

MR. TUVESON: What are you going to do about that?

MR. STEIN: Well, the issue is whether the conferees are going to extend the construction deadline. I think we are on notice that they are delinquent now. My suggestion is that we give them a few more months to get their plans and specifications in. If they don't do that the conferees will be able to make a judgment on the final construction date enough in advance of letting the contracts on whether we are going to give them more time or proceed. It would seem to me that the indicia of good faith of whether they are going to proceed is when they are going to get their plans in.

What I wonder--and this is just a proposal I am going to make--what do you think would be a reasonable date we can expect those people to have plans in to give you enough time to review them and give your approval of them so they can let the contract? When do you think is a reasonable date? Do you think by the middle of December or not or do they need more than that?

MR. GINNER: I would say--

MR. STEIN: Please identify yourself.

MR. GINNER: Gary Ginner. I would say realistically, since we do not have the preliminary engineering report at this time, that to expect the final plans by December is a little unrealistic. I would say February or March myself personally.

MR. STEIN: If this is what you say, then let's face up to the situation. If they are going to get in plans by February or March, what does that do to the proposal to let the contract by March and take advantage of the construction season?

MR. GINNER: Well, I think that would be all right. That would give them over a year from March to have the facility completed.

MR. STEIN: What do you mean, give them over--

MR. GINNER: Assuming the extension. Excuse me.

MR. BADALICH: So that would give them until--

MR. GINNER: You would have in effect two construction seasons, you would have the summers of 1970 and 1971.

MR. STEIN: When are they supposed to get the preliminary plans in? Can we expect that in two months?

MR. GINNER: The preliminary engineering

report should be in within the next week. I talked to the consulting engineer a week ago and he said he would have it in here within two weeks.

MR. STEIN: Let me raise this point with the conferees and we may be able to get in touch with this again. I think we have a faster cutoff date.

Let's say that they are to get the preliminary engineering report in by the end of August. If they have not gotten the preliminary engineering report in by the end of August, I think we will take it that Wisconsin and the Federal Government are recommending that no extension be granted. If they do get the preliminary engineering report in by the end of August, we can then arrive at a specific date with a recommendation from Minnesota and the engineer as to the exact date they expect to get the final plans in. We will take that up with the conferees again without the necessity of our meeting, because I think we all know the issue, although we will try to do this in public so you will know the dates and make a judgment on these at the time they come in.

Now, I would suggest that they shouldn't have--do they need more than 6 months after the end of August to get the final plans and specs? We should shoot for when, February? The end of February. Let's set that up tentatively, the end of August to the end of February, because I think if there is going to be a consideration--and I think Mr. Damon may very well have a point--you will be able to make a judgment by February as whether you are going to meet your conditions or not. So, in other words, the end of August for preliminary plans and the end of February for final plans.

By the way, how long does it take you in a plant like this to review and approve those plans? It shouldn't take too long, should it? I know you--

MR. GINNER: I would say roughly 30 days.

MR. STEIN: Pardon?

MR. GINNER: I would say 30 days.

MR. STEIN: Thirty days. End of February, March; that would bring us up to April. I hope they are not going to lose--

When does your construction season start?

MR. BADALICH: Right about April, depending on the floods in the community.

MR. STEIN: I know. What I am getting at, I am just trying to think this thing out with you people. I would like to have a date of April 1, where they can be approved and they can be ready to let the contract by April 1, so they have two full construction seasons and not an excuse. Is that at all possible? Can we push that up, gentlemen? If you need your full 30 days can we push that up to final plans at the end of February and ask you perhaps to review the plans and specs by March 15 to work with them? Is that at all possible?

MR. GINNER: I think this is possible. The reason I said 30 days was sometimes they require additions or alterations.

MR. STEIN: Yes.

MR. GINNER: It depends a little bit on what time you get the permit typed up and sent out.

MR. STEIN: I understand that. But if we can, let's try. I don't want to cut down on the city's time if the State will make the extra effort here, and I know it is a burden. But I would like to if we can, if we are going to sell this, I think what we should try to do is get this thing all set by April 1st so they reasonably can have two construction seasons without an excuse. O. K.?

All right, let's try that. The end of August preliminary, the end of February final plans and specs. We would hope to have the approval of the State in not more than 2 weeks and hopefully give them the go-ahead so they can take care of 2 construction seasons.

All right, let's move ahead.

MR. POSTON: You know, one thing that I think is important here is that we let the man who is designing these plans and specs, making the plans and specs, know the urgency of this thing and put a little bit of responsibility for hustling on this project on his back.

MR. STEIN: I think that is fine.

MR. POSTON: Rather than you the Chairman trying to make amends for him and extend his time a little, it is up to him to do a little of that.

MR. STEIN: Let me tell you this, I don't think he has any time extended, certainly not as of this moment. Unless he makes these dates, and he has got dates hanging over him of the end of August and the end of February, I know what my recommendation is going to be in that the original date we set still stands. That hasn't been changed by the conferees. So I think the ball definitely is on their side of the net and I have no notion of who the engineer is.

MR. POSTON: So do I.

MR. STEIN: Do you know who it is?

MR. POSTON: No.

MR. STEIN: By the way, this is certainly not personal.

Let's go to South St. Paul. You heard the presentation. Here they are asking for a year extension. And there are several reasons for that that were advanced. One is the closing of a major meat packer and other difficulties. What do you think of that?

MR. POSTON: I think that I still would like to have the final date not extended until he has failed on this date and made every effort to catch up somewhere and to maybe extend the preliminary dates. If you will remember, the Metropolitan Sanitary District came along and were behind about a year and they found ways and means of stepping up their activity to the extent that they are going to meet this schedule.

MR. STEIN: Well, when you talk about putting the pressure on them, of course the Metropolitan Sanitary District has been through the Stein wringer already. That is why they came up with it. And I am very happy they did this.

But again we have a problem. Have they gotten the preliminary plans and specifications in South St. Paul?

MR. BADALICH: Yes, Mr. Chairman. In fact, I was instrumental at that particular time. We had them in in early 1967.

MR. STEIN: South St. Paul, yes, that is your home town. When you were there they were on time.

MR. BADALICH: Thank you.

MR. STEIN: How about the final plans and specifications?

MR. BADALICH: Yes, on Phase No. 1 they

have been completed and are under construction. Phases Nos. 2 and 3 depend on the operational results they receive from Phase No. 1. Now, this entails the expanded treatment facilities for capacity and also for BOD reduction, plus this R and D grant. He indicated in his statement that it would be November, the latter part of November, of 1969 before the first phase unit is operable and then from there they will have to go through the evaluation, etc.

MR. STEIN: How long would that take?

MR. BADALICH: Well, normally under a schedule in phasing of sewer treatment plant construction we like to get at least one complete season of operational data and I think that is what we are striving for and that in turn brings up the 1-year delay. But then again, since then the one major packer has moved out of the area and again this may be that the treatment facilities after the first phase in operation might be adequate to meet the Federal-State enforcement conference recommendations. But then again we are sure that they probably will not meet the State recommendations, which are more stringent.

So at this particular point we can't say yes or no that they will meet the requirements after the first phase or not.

MR. STEIN: Yes, after the first phase--which should be at the end of December of 1969?

MR. BADALICH: November of 1969.

MR. STEIN: November of 1969.

MR. BADALICH: November 29.

MR. STEIN: Would we need more than a month to determine whether the first phase in fact, with the closing of the packing plant, was meeting the conference recommendations? Would we be able to determine that by the first of the year?

MR. BADALICH: Well, I think that the flow will certainly diminish, but then again they would not have any operational data at all seasons of the year and that is, I think, the critical part in going ahead with any expansion.

MR. STEIN: I understand that. But you see, we have two problems as I understand you, Mr. Badalich. One is whether they meet the State requirement, which is more stringent. You indicate that if they complete Phase 1 with the closing down, I believe, of Swift, it is just possible they may meet the conference requirements.

MR. BADALICH: That is the speculation, but we will not know until actually this comes in operation.

MR. STEIN: Yes, but will we need a whole year of operation to determine that?

MR. BADALICH: I don't know, Mr. Stein. I think logically it certainly is good to evaluate your treatment facility after it is once constructed. And as they say here in Minnesota, where we have four definite seasons, it is well to get the winter operation, because that is probably the most critical in all our treatment plant designs.

MR. STEIN: I would think so, that the critical point comes in the winter. In other words, it would seem to me again--let's put this this way--we are going to come to a crunch at the end of February with this Mankato operation. With South St. Paul, by the end of February we should have a pretty good idea of whether Phase 1 is going to meet the Federal-State conference requirements, because we will have gone through most of the winter, which is your critical period, certainly with DO and probably pathogens under the ice cover. So by February we should be able to make an evaluation.

Again, I am just making a proposal here, Mr. Poston. Possibly in cooperation with the Federal people I wonder if we can ask you: 1) at the end of November we certainly make a judgment whether South St. Paul has completed Phase 1;and 2) at the end of November, if this judgment is made by then, the Federal people in cooperation with the State people will be prepared to begin making an evaluation of the South St. Paul Phase 1 results. I don't know how much of a staff Wisconsin has or whether it wants to participate, but if it does it is welcome. I think this is merely a technical question in getting the data. If Minnesota doesn't have the people, maybe at least the methodology should be worked out among the three jurisdictions. We will do this and have a report at the end of February. So at the end of February we will be able to make these judgments:

1, whether Mankato is moving ahead with

its final plans and specs and,

2, whether Phase 1 of South St. Paul has been completed and under that whether because of the closing of the packing house this meets Federal-State requirements or whether they can proceed with the expansion or whether they will need the full year evaluation before they can proceed with the expansion.

And these are the matters that the conferees can take up after the end of February. We should schedule that in the early part of March to make these judgments.

If this is going to work, there is going to have to be Federal-State planning to begin this evaluation as soon as that South St. Paul Phase 1 plant goes on stream. You can't begin gearing up after the end of November or December and expect to have it done. In other words, we will have to work out this summer and fall exactly what we are going to look for, agree on the methodology and assign the personnel. O. K.?

What will have to be taken into account, of course, will be the research and development project during the two where we have come out on that. Maybe we can utilize some of the personnel on that. Are we in agreement with that, that we will proceed with that before we go to any consideration of extension of the dates?

And I have one more--pardon me.

MR. POSTON: I think this is a wise thing to do, particularly since when you had that Stein wringer going before and the MSSD asked for extension of time because they wanted to evaluate their operation, the conferees refused this extension of a year's time there and we have seen now that they were able to go ahead. So I think this is a wise decision to make this at a later date.

MR. STEIN: Yes. Well, again, as we proceed, I would recommend too that we get together in some meetings with the State and Federal people to see what kind of realistic schedule or proposal we can come up with for South St. Paul and see if it is in the proper interest of pollution control to do this.

I appreciate what you say, Mr. Poston, as these things go forward. As you know, in the Calumet area around Chicago many of the steel industries were asking for extensions of 2 and 2-1/2 years, and when we finally went through this careful evaluation process a good deal of the work was done with only a 6 months' extension and a lot of it in a year extension and just a few phases 18 months; we never got to 2 years or 2-1/2.

So in addition to these reports, let us look over the situation very, very carefully with the technical staff and come up with a possible recommendation. If there is a possibility of working it down, I think the only way is in full consultation with the discharger, and that includes the city here, because I don't think the Federal agency can do this itself. The steel industries agreed, as you well know, or the oil industries, to the shaving of this operation down, and I think by February we should come up with this program.

In addition to that I have one more thing to discuss, because it seems that this is moving all right--again I would hope Wisconsin can participate, but this may be a drain on Wisconsin resources--and that is whether the Federal and State people can get together and come up with an evaluation on the stormwater project in the various communities. These look good from what has been said up to now, but again I think what we need is a critical evaluation and recommendation if we are proceeding in the proper manner and in the proper time frame for the stormwater activites. I suspect we are largely on the track, but I think we are going to possibly need an evaluation on that. As you can appreciate in all these cases, as we solve problems we begin zeroing in on some of the more difficult ones until we come out.

Are there any other suggestions that we might have on this?

MR. TUVESON: Mr. Chairman, Minnesota will concur in the recommendations.

MR. STEIN: I have one more recommendation and let me put this out as a question of dicta. It would help the situation considerably for the Federal Government in this regard if Wisconsin and Minnesota got together on boat control and came up with a regulation on the discharge of wastes from boats between themselves. Gentlemen, even if Federal legislation passes, we are going to have to put out a regulation or a requirement.

We were particularly fortunate in the four Lake Michigan States and the five Lake Erie States in that they all came up with the same recommendations. I think it would help us all if we could get a uniform recommendation one way or the other from Wisconsin and Minnesota. This would be by far the best way to handle it and this is going to be, as I say, regardless of whether there is Federal legislation or not.

I would hope between now and February that you will be able to get together, and, if you wish, you can set up a committee and put a Federal guy on it to help do some of the technical work. But I hope we can get a report so that an agreement may be reached which will enable us to move forward on this boat pollution. I believe this is the only area where in principle we have contiguous States such as Minnesota and Wisconsin that do not have perhaps completely compatible regulatory programs.

MR. BADALICH: Mr. Chairman, I think we would be receptive to that type of meeting, but you have to realize that Minnesota has been the leader in this. We have had a Statewide boat head regulation since 1962 and Wisconsin has one in effect only on their boundary water, which is the St. Croix River, at this particular time.

We would certainly sit down and talk this over, but again we feel we are following the expertise of national organizations and I guess we stand behind our device as much as they do.

MR. STEIN: That is right. I am making no substantive judgment. I am just talking about this procedure, because my guess is that chances for Federal legislation are pretty good. And the problem is going to be on us. It is on us now. It is on us in the conference. We can't delay it too much longer. We will all be in a lot better shape if we can come up with uniform recommendations from the two States.

We have not faced a situation in this area yet where we found two States in disagreement. Maybe we will, but I hope it is not here. I am not making any judgment on what regulation or device should be used because I surely can't. We would ask you to do that.

And if you would, Mr. Poston, what has been helpful in the past--let me come up with another suggestion--what has been helpful in the past has been a technical committee to prepare a report.

Mr. Badalich, let me ask you this. How about either you or someone designated by you being chairman of that committee, set it in motion and come back with a report incorporating the Federal views? Mr. Poston will designate someone. I am sure Wisconsin will. You will report on the committee views at the next conference or designate someone from the committee to do so.

MR. BADALICH: I will be glad to do it.

MR. STEIN: All right, thank you.

Now, are there any other points that we can cover?

MR. DAMON: Mr. Chairman.

MR. STEIN: Yes.

MR. DAMON: You have hinted several times as to whether Wisconsin would or might express interest in participating in some of these items where extensions have been requested.

MR. STEIN: Yes.

MR. DAMON: I will carry back the

recommendation that Wisconsin will participate, although we recognize that it is the primary responsibility of the State of Minnesota. We have an interest and will at least participate in the discussions on these matters.

We will also have a representative on this boat toilet problem and see if we can't resolve that one with some mutual satisfaction.

Further if you want to explore that clear water problem to any greater extent, we would be willing to participate in that as well if you feel it desirable.

MR. STEIN: Would you be specific? What do you mean clear water?

MR. DAMON: You mentioned something about the Federal people and the two State agencies talking about clear water separation--

MR. STEIN: No, stormwater.

MR. DAMON: Stormwater, excuse me.

MR. STEIN: Stormwater separation. O. K. Let me say on that, the only reason I was reluctant is that while it is of vital interest to Wisconsin in a water quality sense, I didn't want to put you in the position of adding a burden on your staff. I don't know that this would take too much time, but I am certain that any participation we got from Wisconsin could only help the situation and we would hope that you would go in with that. But I think we need a report on that.

O. K., are we all about set?

MR. BADALICH: Yes, sir.

MR. STEIN: If we are, again I think in a way this has been a very productive conference. It is a conference at which we have gotten reports that indicate that within the present scope of knowledge we are on top of the program and on top of the problem. We have a program that can work and it is going to work in the very near foreseeable future. The real difference in any of the major operations--in the treatment of the wastes--is not precisely what we are going to do but when we are going to do it. The sole difference may be a year, which is not that much.

There are two unresolved areas yet, of course, that have to be handled. One of these is boat pollution. In boat pollution, when I pointed out the unresolved areas, none of the jurisdictions are proposing to discharge wastes raw from boats. It is a matter of which treatment measure will be going forward.

And the second thing is the stormwater problem. I would say that I think the actual progress in the stormwater problem is as good here as anywhere in the country. I think again the question here is not so much one of are we going to do anything about it; it is how we can do it most expertly, because in this conference area we are probably in fact doing more on stormwater in folding that into the corrective program than we have in any comparable metropolitan area.

MR. TUVESON: Mr. Chairman, what are the mechanics now of winding this thing up? Will you prepare findings and recommendations?

MR. STEIN: Yes, we will prepare a summary which will say what we said here, no difference, and send it to you. Presumably we will be calling another meeting in late February or early March.

MR. TUVESON: You, Mr. Chairman, will reconvene that one?

MR. STEIN: Yes, yes.

MR. TUVESON: You will set the time and place?

CLOSING DISCUSSION AND EVALUATION

MR. STEIN: After consultation.

MR. TUVESON: All right.

MR. STEIN: After consultation with you people here.

O. K.? Are we all set?

I want to thank you all for staying with us. I think we are on our way to a clean upper Mississippi River.

Thank you very much. This meeting stands adjourned.

(WHEREUPON, at 5:15 p.m., the meeting was adjourned.)

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